IGOR WITKOWSKI

DIE WAHRHEIT ÜBER DIE WUNDERWAFFE

TEIL 3

GEHEIME WAFFEN-TECHNOLOGIE IM DRITTEN REICH

Igor Vitkovsky

The truth about the magic bullet, part 3

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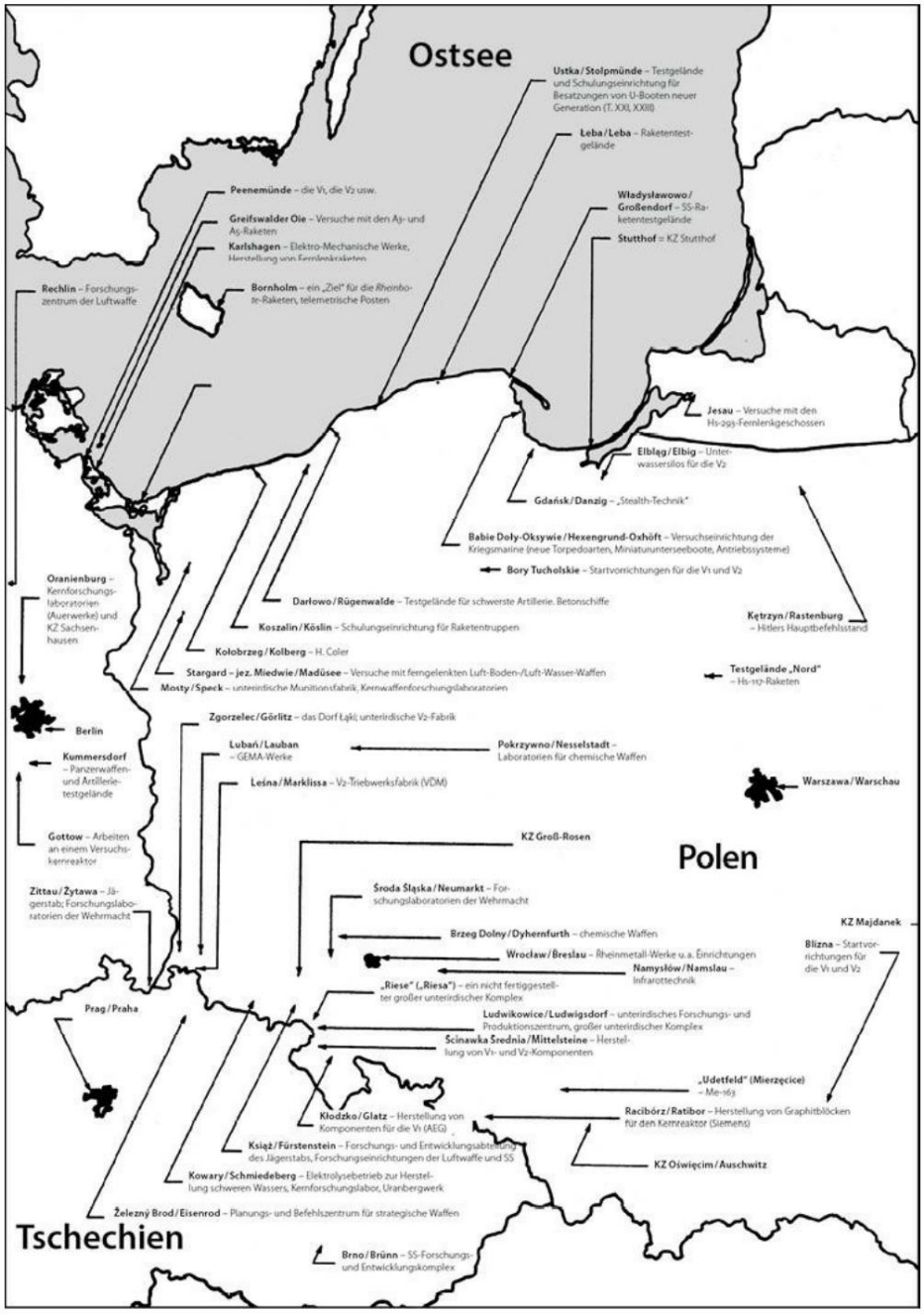
THE TRUTH ABOUT THE MIRACLE WEAPON

Secret weapon technology in the Third Reich

part 3

The Third Reich as the Kingdom of Secret Weapons

The unknown research empire of the SS



Selected locations east of Berlin associated with research and development work or the production of German "special weapons"; the three most important concentration camps are also listed. The map shows the post-war border course.

In memory of Jacek Duszczak who was so close to the answer.

introduction

I have decided to “repeat” as an introduction an article that I had already published some years ago in the book “Hitler – pytania niepostawione” (“Hitler – Unasked Questions”) (2005). It has been modified and expanded somewhat. I have decided to take this step for the simple reason that this article was originally intended (ie before it was "added" to the book mentioned) precisely as an introduction to the continuation of the first volume of "The Truth About the Miracle Weapon". I had dispensed with it at the time, so I made the decision to treat it as a sort of supplement to another publication. Eventually, however, so much new source material was added that the writing of a third volume of "Truth" seemed real, "requiring" its own introduction, as it were.

The considerations presented below may appear somewhat provocative at first glance, but the complex of questions themselves is also provocative. The phrase "technical progress in the Third Reich" alone may sound politically or morally suspicious. However, I am convinced that these reflections will be received very differently by those who have already read the first two volumes of this elaboration. It was the conversations with the readers that prompted me to tackle the problem in this way. The very large number of descriptions of pioneering technical concepts discussed in the first two volumes led to the same questions on every occasion and meeting: "How was it possible?", "How did you do it?". Like everyone else, I can be wrong about the answer, but I believe that the questions themselves are important and valuable and that we must ask them. Here is the text mentioned:

A group testing liquid-propellant rockets in the early 1930s. First from the right next to the rocket: Professor Oberth, a mysterious figure during the war (his role has never been fully elucidated). Second from the right is the boy von Braun. One of the lesser known members of this group was Ari Sternfeld - a Polish Jew from Lodz who shortly thereafter designed the first space suit.
Later he worked in the USSR. He was one of the forgotten and in the West completely unknown pioneers of space technology. (Smithsonian Institution Archives)

The most outstanding "architects" of nuclear physics. She would soon share her attitude towards fascism (photo from 1927). From left: Enrico Fermi, Werner Heisenberg and Wolfgang Pauli. Such charismatic geniuses are probably lacking in today's physics research. (AIP Archives / Emilio Segre)

Nobody needs to be convinced that Hitler is one of the greatest, if not the greatest, criminal in history.

He probably suspected that one day the Germans would see him like this. To my knowledge z. For example, no document signed by Hitler was ever found that sanctioned the Holocaust. One could get the impression that he wanted to keep a clean slate. In the memoirs of his associates, he appears rather as a statesman, commander or revolutionary of National Socialism. Nowhere does it appear in connection with the tens of meters high flames above the chimneys of Auschwitz or the more than 3 km long railway ramps of this camp.

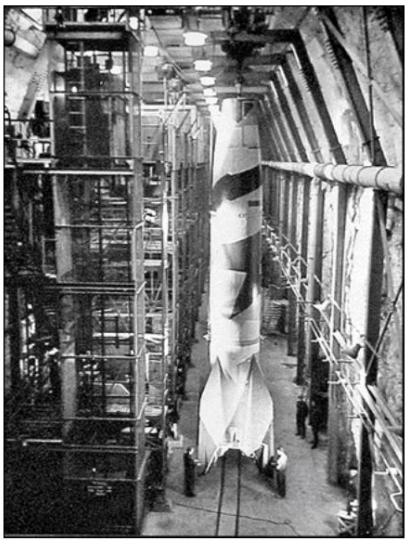
In an attempt to get an image of this man, we use

therefore different, sometimes dissimilar elements - not an easy task. We discern, first of all, the wits of a gifted assassin; but the tricky part is that it wasn't the only aspect of his character. Incidentally, this aspect relates more to the outside world; the Germans themselves saw him differently during his rule.
What was particularly striking about the Third Reich itself, however, was its terrifying vision of the complete transformation of society along feudal lines, a vision that we could in all conscience call "regression of civilization."

The Copenhagen Physicists' Conference in 1936, which set the direction for future nuclear research. It still took place under the sign of international cooperation, although sharp differences of opinion became apparent for the first time. The fact that the conference was in every respect dominated by physicists from the Third Reich, which was just beginning its intense militarization, aroused concern among foreign participants. Nevertheless, many local Jewish physicists still took part in it. Sitting in the front row from left are: Pascual Jordan (holding his chin, wearing glasses – like Oberth, he too was to become the “grey eminence” of physics research in the Third Reich), Heisenberg, Born, Lisa Meitner, Stern and Franck. (Niels Bohr Archive, Copenhagen)

Society itself was to be transformed into a totalitarian system based on controlling the individual from above and amounting to total control. Incidentally, this is how Hitler himself described it:

"Children belonged in the youth group at the age of ten, in the Hitler Youth at fourteen, then in the party and in the labor service. And after the Wehrmacht we will immediately take them back to the SA, SS, etc. and they will not be free for the rest of their lives."



The V2 rocket in the underground "Mittelwerk". Also in connection with this program there are many open questions: 1. The rocket could reach space for a short time (up to an altitude of about 170 km). Some time ago a documentary film prepared by someone from the Main Commission for the Investigation of Nazi Crimes was broadcast on television. The thesis was put forward that a manned experimental version had also been built and tested in secret – the world's first astronaut was supposed to be a Polish Jew whose name could never be determined. 2. Apart from the production program for the V1 and the V2, a much more secret and unknown concept was obviously realized in the "Mittelwerk" - the documents described below indicate this. 3. Furthermore, the almost completely unknown and close connection between the V2 and the development program for weapons of mass destruction was also described - biological and nuclear warheads were developed for the V2. (Archive)

If we look at this in the context of our democratic system, which is based on human freedom, then the suspicion arises that the social suppression of individuality and the exchange of ideas very soon stopped the further development of the Third Reich, made material progress virtually impossible and would be the beginning of the end of the system. Incidentally, fears of this kind were also expressed in Hitler's own circle. Reich Minister Albert Speer brought them

excellently expressed: 3

> “Under normal circumstances, people who turn their backs on reality are quickly brought down to earth by the scorn and criticism from those around them. In the Third Reich there were no such corrective measures. Instead, all self-deception multiplied like in a hall of mirrors, while gradually becoming an integral part of a fanatical dream world that has lost all connection to the murky outside world. I could see nothing in these reflections except my own face reflected multiple times.” Hitler also noted the following: 1

> "I don't want an intellectual education. With knowledge I spoil my youth".

A quasi-confirmation of this tendency during the "development period" of National Socialism was the clear decline in the number of students in the area of exact sciences and technical disciplines - by no less than 40 percent (summer semester 1939 compared to winter semester 1933/34).

[1] So an anti-intellectual and anti-progressive person?

This is where the problem starts.

There is a clear contradiction. When dealing with claims and facts, when there is a discrepancy, we should always rely on the facts first. What are they telling us?

I leave out here the circumstance of a transition from misery and record unemployment to prosperity, from the lack of a bicycle to the dream of owning a car (because factors that could be described as external also contributed to the economic recovery), also because it was significantly more important there are topics. Although totalitarianism flourished and brought with it all its negative consequences, scientific and technological development accelerated like at no earlier or later in human history. Scientific and technical progress is, to a certain extent, spiritual progress. If the talk is of "free exchange of ideas" or its absence, then we must not use the universal guideline of the

Neglecting civilization development levels - the actual amount of information created by or flowing through a civilization. In the present case it was certainly very high.

It is known that the level of technology did not advance significantly from the end of World War I until 1939 or 1940. Horses and linen-covered wooden airplanes dominated the scene. The sensation that was to bring the Germans to their knees in September 1939 was an anti-tank rifle with a caliber of 7.92 mm (Model 1935 / Ur), which was kept under the strictest secrecy.

In fact, it took only a few years to build a rocket that could reach space (the V2 in vertical flight), at a time when e.g. B. in Great Britain the construction of such a rocket was not even considered theoretically possible. Work on the rocket was not yet complete when plans for an ICBM and later for a space station, which Wernher von Braun described after the war, were already being drawn up. Just before the war, one professor even claimed that “we now know practically everything about electricity”. Just a few years later, IR semiconductor detectors were being produced for numerous applications and devices, including various types of homing warheads for bombs and missiles.

The Reich Minister for Armaments and War Production Albert Speer, Goebbels and Wehrmacht generals admire the successful launch of a V2. (Federal Archive Koblenz)

The pioneering character of the MP-43 (described in more detail in Volume I) is evidenced by the

fact that after the war she became the model for a whole family of handguns. That becomes clear when comparing this developmental version of the carbine, in which the front sight has been moved back slightly to the fairing of the gas line and barrel... (Archive)

… with the post-war Heckler and Koch G-3 rifle (this time designed for rifle ammunition), which became a major export hit and is still used by several dozen armies. (Photo: Strzaÿ)

Drafts were made for the first semiconductor amplifier (H. Welker, 1945) and the first functioning program-controlled digital computer, which was used by the Henschel company to create target search algorithms for the Hs-293 projectile; a special programming language called *Plankalkül* was developed for him (K. Zuse, 1941).

[5] Few people are aware that all the basics of the most "revolutionary" invention of the post-war period, namely the transistor, had already been laid in Germany in the 1920s, when Julius Edgar Lilienfeld patented a transistor using copper sulfide as a semiconductor (the author emigrated to the USA, where he patented his achievement in 1930 under the number 1,745,175).

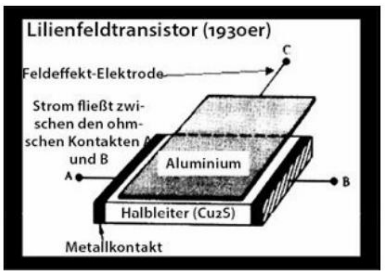
[5]

Shortly thereafter, in 1935, his compatriot Oskar Heil patented a improved solution (British Patent No. 439,457) . now look at aviation. considerably

The shockwaves that spread after the presentation of the first jet fighter, the Me-262, were still felt when, a year and a half later, the next generation of jet aircraft (e.g. the Ho-229), the third generation, was ready for testing was already in preparation.

Examples would be the Lippisch P-13b supersonic aircraft, the Ta-283, or the *Triebflügel* von Focke-Wulf, a fighter that could take off and land vertically (they were detailed and documented in Volume II of The Truth About the Wonder Weapon). In this context, the unusually progressive concept described below, which was realized by the SS in Pilsen, seems very interesting, whereby at the

The main criterion for the choice of personnel was the ability to “stand up to visionary projects”. According to this principle, even the people connected with Peenemünde were excluded! Leaving aside the technical aspect itself, it should be noted that in this case a research management system was introduced which, although a fundamental condition for research progress, under normal conditions would not have had the slightest chance of being realized - even not in the Wehrmacht, not to mention other countries.



Contrary to popular belief, the rapid development of semiconductor electronics in the 1950s was based on pre-war discoveries that were technologically advanced during the war. The drawing shows the schematic of the 1938 Lilienfeld transistor. (Internet)

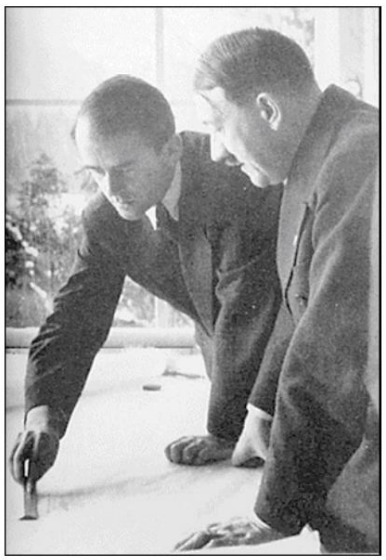
No country had comparable weapons or systems at the time. After the war, the American President Eisenhower expressed this fact quite unequivocally - but I suspect that he was also unaware of the most interesting developments: [8th]

> “German technology was a good ten years ahead of Allied technology. Fortunately, the German leadership didn't know how to use this lead and realized too late what chances were in front of them."

The picture of a young Wehrmacht recruit (on the Oder Line at the end of the war). It shows the realization of two concepts that were among the most groundbreaking: the automatic carbine (for medium cartridges) and the bazooka. The former, the MP-43, compared to a submachine gun, delivered a high rate of fire even at a range of several hundred meters (though the technological approach was entirely different). The recoilless grenade launcher fired shaped-charge grenades and was the first truly effective anti-tank weapon for the individual soldier and also cheap to manufacture. (Seelow Heights Museum)

This phenomenon forces a deeper reflection, the meaning of which goes beyond purely historical considerations, especially in relation to the present. Let's take an example: The widely used passenger aircraft *Boeing 737,* which is used by many airlines (e.g. LOT) within Europe, was developed in the mid-1960s and is largely based on design elements of the *Boeing 707 ,* which is around ten years older 40 years, the aircraft is still in production today and is in great demand. There are no plans to stop production (it's being modernized, but that only confirms how small the room for progress is). In early 2004, US President Bush announced plans to return to the moon and “conquer” Mars in the third decade of this century, using rocket and ramjet propulsion technology that was already broadly defined in the 1930s existed. In 2005, the Americans announced with bang and trumpet their next step in the conquest of space, which would be based on abandoning space shuttles and returning to launch vehicles from the Apollo program - a concept developed by Wernher von Braun. An article reads:

"The vision presented by NASA of the further development of human spaceflight unfortunately confirms the huge scale of the fiasco of the Space Shuttle program and at the same time the achievements and visionary technical solutions of the Apollo program, which apparently ended prematurely in the 1970s aiming to increase funding for the development of the Space Shuttle program." 10



Hitler and Speer (Hulton Archives)

Wernher von Braun surrenders to the Americans. The reception was unexpectedly warm, although the Americans had only a vague idea of long-range missiles.
(Photo: NASA)

Americans aim to reach that level in 2018.

It may seem as if progress is practical for
come to a standstill - compared to a period of time and a system

seen as a step backwards for civilization, a dark impasse in the history of our civilization. A good example that illustrates this contradiction is the whole issue of German aircraft technology, which was rated very highly by the Americans and others. Senator Harry F. Byrd spoke of "revolutionizing the very nature of air warfare," and General Donald L. Putt observed: 6

> “The progress of their research in jet and rocket propulsion, aerodynamics, thermodynamics, supersonic flight physics and other areas was clearly far ahead of our achievements. However, I do not believe that the Germans are inherently more talented than the best American scientists and engineers. Finally, we developed the atomic bomb.
>
> The difference, to use aviation jargon, was that while we made great progress in the field of conventional development, the Germans blazed and exploited entirely new avenues in the field of future aeronautics." (On this occasion, it should be noted that of

the approx twelve senior scientists who worked on the American atomic bomb, only Feynman, Lawrence and Oppenheimer were American, the latter being educated in Germany.)

Despite the freedom to formulate thoughts and exchange ideas, our system is not evolving, and annual economic growth of one to two percent is already considered a success in the developed Western European countries. In contrast, the totalitarian system of Nazi Germany absorbed new and innovative ideas—at least in the fields of science and technology—with uncanny efficiency and breakneck speed; it removed the system blockages that we are familiar with from the present ("normal" science is characterized by the fact that it basically only deals with what it already knows).

The MP-43. (Archive)

So is the thesis of the superiority of democracy and “freedom of thought” merely a myth? Perhaps our democratic world is just a short-lived episode in history? Or maybe the problem lies elsewhere, namely in the ability to create thoughts and to formulate opinions and ideas? In this regard, the virtue of our system—the freedom to exchange thoughts and ideas—becomes secondary when people think in terms of mainstream culture and consequently don't have much to exchange. (The second danger is that mass culture will become the main mechanism of politics, replacing normal opinion-forming processes).

This development is most evident in “Democracy No. 1” – the USA, where the level of education is very low. A leading American scientist observed: 7

> “Many educators and policymakers agree that the United States is dramatically falling behind the rest of the world in this important area [of education].
>
> Results of the National Assessment of Educational Progress surveys and

of the Third International Mathematics and Science Study, covering 41 countries, is often cited as evidence for this failure."

However, let us return to the main topic – to Hitler.

I wonder if a glimpse into his mind will reveal traces of such flashes of inspiration that would support the facts and might give us a clue as to their origin (although logically Hitler was not the one who created German science).

Some interesting elements "on the subject" can be found in Hitler's irrationalism. For example, consider the following statements made in The *Wolf's Lair :* "Necessity not only teaches man to pray[2], but also to invent and,

most importantly, to accept it. Every new creation destroys the value of so much other work that fierce battles almost always ensue to put the newly created to use." (04.01.1942)

Or on another occasion:

"People think illogically all together and the professors are the worst at it."

These statements seem banal and not exactly brilliant, but such an understanding of the circumstances of progress is highly unusual. If it were otherwise, the current practice would not be that no professor puts his signature under a concept that exceeds his knowledge. A feature of the Third Reich was that the professors did not rule science with absolute claims - Hitler did not trust intellectuals in particular. The system was a bit more complicated.

In this context, it is interesting that Hitler recognized two obstacles to development: the mental inertia and narrow-mindedness of academic science and Christianity. on the 21st
For example, in October 1941 he said in the *Wolfsschanze:*[2]

"Christianity suppressed the heyday of the German world for

over 1,000 years - it wasn't until the 18th century that we more or less reached the level the Romans were at until Christianity appeared. […] If we eliminate this plague, we will do something for humanity, of the magnitude of which our men at the front have no idea."

President JF Kennedy and Wernher von Braun in 1963. (Photo: NASA)

The Third Reich made outstanding achievements in science and technology. Some people see it differently, but it is not a glorification of Nazism when we acknowledge this fact or even admire the 1944 jet concepts. Incidentally, one should not compare the technical achievements of a system with its moral side.

Just because a country is technologically advanced doesn't mean it can't be criminal. An analogy: the Greeks of classical antiquity made outstanding achievements in the humanities, far ahead of their time, but not in the realm of exact science or "applied engineering"; they did not even know the simplest mathematical equations, all relationships were expressed in words.

Addressing the reasons for this acceleration in scientific and technological development is valuable and, contrary to appearances, even morally appropriate. We need development to meet the challenges of the new millennium, not to mention Europe's diminishing role in the world.

This is primarily a question of overcoming mental barriers.
If the Germans, with their party apparatus burdened by a sick ideology, were able to do this, it would be all the more possible for us

been. This is of course not the only lesson we can draw from the analysis of research projects in the Third Reich, nor is it the only warning - but perhaps the most useful for us.

* * *

This volume is somewhat reminiscent of the first two volumes, but there are also some key differences. Contrary to my own expectations, I managed to find many new sources that, so to speak, allow a glimpse behind further curtains where descriptions of extremely modern concepts of the Nazi empire lay hidden in unmanageable archives. The first part of this volume contains news from the field of conventional weapons, including intelligence descriptions of secret plants and laboratories related to "special weapons" - about which very little was previously known.

However, the traces initiated by the last part of the second volume have turned out to be the most interesting and fruitful.
Among other things, they made it possible to look at two very exciting questions in a new light: the preparation for the total war phase using weapons of mass destruction and, as it turns out, the very extensive secret research projects of the SS, which are also related to the first question. At that time, these projects were technically very advanced, which not even Reichsminister Speer knew, as he later wrote in prison. So I invite you to read it.

The Third Reich
as the Kingdom of Secret Weapons

Conventional weapons - new documents

Armed Vehicles

The first volume of the book includes a chapter on the often-overlooked advances made in the field of armed vehicles during the Third Reich. It is known that during the war there were very big changes in this area - it is enough to change the *Pz. Kpfw. I* of 1939 (armed only with a submachine gun, very poorly armored) with the *Panther* or the *King Tiger .* It was essentially a two-generation leap, accompanied by a complete reassessment of the role of tanks on the battlefield – from a means of supporting horse and infantry to a role similar to that of today. In the years 1944/45, however, another great revolution was being prepared, which I have described in Volume I. Inventions appeared (in the form of prototypes and short series) that, to be honest, were more akin to 1970s armor technology. As a quick reminder: It was about the diesel drive, the turbine drive (gas turbine, e.g. with an output of 1,000 hp; nota bene, the *King Tiger that* was to receive it would have been a perfect design for the time, if it weren't for that its propulsion, which allowed it to reach a speed of 20-30 km/h in cross-country terrain), night sights and devices for night-time observation of the battlefield (which allowed some Panther companies to deal with a "blind" enemy almost as if during the day battle). But that's not all - hydrokinetic and electromagnetic drive systems, stepless hydrostatic slewing gears, automatic manual gearboxes were also added.

Several *Panthers* during a troop shift in the Kostrzyn (Küstrin) region during the Russian January offensive in 1945. (Archive)

These achievements remained isolated news, since the Germans did not manage to create a tank that could have "cumulated" them. The effect of such a solution would undoubtedly have been considerable. However, what I presented in the first volume mentioned is only part of the truth. There were other directions of progress in this area.

Let's start with a certain forgotten version of the "good old" *Panther* - from *version* F. [11] It was created as part of a program officially named *Panther II,* analogous to the King Tiger , also known as *Tiger II .* The Germans only managed to complete two prototypes. Certain improvements were introduced based on experience at the front, but there were also some entirely new solutions. The Panzerkampfwagen had different, better shaped armor and the all-new turret was to be armed with a significantly modernized gun (75mm). The fuselage side walls consisted of single, straight and inclined to the center surfaces. The most interesting was the tower built by the Rheinmetall company: it was significantly smaller than the standard tower, more reminiscent of a truncated pyramid and was given the name "Schmalturm". War experience has shown (and still shows) that about half of all hits land on the front of the turret. The top priority was therefore to reduce its front profile while at the same time sloping the side walls.

A *Pz. Kpfw.* left behind in Lower Silesia in February 1945 . *IV;* right: a heavy crawler tractor. (Archive)

One of the countless *panthers* left on the fields of the Third Reich in the last weeks of the war. (Archive)

The area of the front armor plate was reduced by about a quarter in the projection. This made it possible to increase the armor thickness to 120 mm. The width of the front armor plate was 1.5 m at the base and only 95 cm at the ceiling. Overall, the tapered tower looked much better than the previous one. The cannon's yoke was also smaller and was designed with the aim of minimizing the chance of jamming in the event of a hit. Its fairing was now in the shape of a bell - similar to that of the modernized *Tiger* - the distinctive vertical semicircle fairing was gone. However, this is only a small technical detail. In fact, the most important change was based on a significant increase in the efficiency of the armament, although it was already (as previously described) considered superior to the powerful 122 mm gun of the Soviet IS-2. Here there were the classic harbingers of future trends: Of course, a night rifle scope (FG-1250) could not be missing. In addition, the following were introduced: • Periscope

main scope with the head on the turret ceiling (which reduced the likelihood of the main scope being destroyed by fragments hitting the forehead armor). • The riflescope mentioned (SzF-1 by Leitz) was equipped with a system for stabilizing the line of sight while driving – but only in the vertical plane. Series production was not commissioned until January 1945.

- The new KwK 44m / 2 gun would have been equipped with an automated loading system, which, by the way, was to be mass-produced by the Skoda works in Pilsen, which are described in detail later in the book and have in a sense been forgotten today. There (in the Krupp works) only new guns were to be produced. However, the completion of production preparations was not planned until April 1945. • Complementing these innovations was a 1,320 mm base spatial imaging rangefinder, the lenses of which protruded from the turret sides and were protected with semi-circular cast fairings. The device would have allowed to accurately determine the distance to the target over the entire firing range of the effective cannon.

Another change that would have greatly affected combat capabilities was the use of the new Maybach Hl-234 engine with a power output of no less than 850 hp (compared to 700 hp in the basic version). As part of the preparations for chemical warfare, which is another overlooked motive in the final phase of the war, the Panzerkampfwagen was equipped with indicators for the presence of toxic ordnance. They took the form of small sensor panels attached to the tower. The latest news, which is rather unusual for Panzerkampfwagen, were openings in the turret for crew firing of small arms intended for MP 43 / MP-44 automatic carbines.

The question of modernization of the two main tanks of the Third Reich in the last years of the war - the *Panther* and the *Tiger* - was already discussed in the report of the USA Technical Intelligence Service (FIAT), which I came across during my "expedition" to the archive there in May 2006 encountered. [12] In particular, I would like to address the points that have not been mentioned in the previous part of this chapter and in the second volume. Here is the summary of the report:

The *Panther* in the Czech Republic (described below), in the final stages of the war. (Archive)

Both of the above tanks differed from earlier designs, among other things, in that their design had already begun during the war, ie after the Germans were able to draw conclusions from the first tank battles. The basic concept of the *Panther* was for offensive actions - it should be able to attack on the march and defeat enemy defenses - while the *Tiger* was designed for more defensive tasks.

Due to the strong armament on the one hand (in the form of the proven 88mm gun, which was possibly the best artillery armament of this war) and on the other hand the strong armor and weak individual performance, it was more like a mobile artillery bunker. It was unsuitable for attacks, since its maneuverability was significantly inferior to other combat vehicles.

The *Panther* was first used in combat in the summer of 1943 and quickly became the basic tank. Gradually it became part of the equipment of both separate and subordinate tank battalions - in tank divisions. The general principle was introduced that each armored regiment consisted of one *Pz. Kpfw. IV* Battalion and a Panther Battalion. The *Panther* was clearly superior to the *Model IV ,* which was mainly due to its armament: The 75 mm gun was characterized by a high muzzle velocity of the core projectiles and great accuracy. The *Panther* also had advantages in terms of armor and maneuverability. Versions D, A and G went into mass production – in that order. The high efficiency of the armament meant that these armored fighting vehicles were the largest when exchanging fire at long distances, between around 1,000 and 2,500 m

had chances of winning. Practice at the front showed relatively quickly that one of the main problems was the short service life of the engine. Whenever possible, the Germans therefore tried to switch to rail.

An abandoned *Panzer IV/ 70(V)* heavy assault gun that was part of the equipment of one of the Waffen SS divisions defending the Czech Republic. (Archive)

The modernized *Panther, version* F. The Panzerkampfwagen was thoroughly modernized, and the changes did not only affect the turret. It should also be equipped with a new propulsion system and, among other things, devices for effective fire control at night and while driving. So these were changes that qualified the Panzerkampfwagen for the next generation. (Archive)

The *Tiger* 's career began a little earlier, in 1942 in the USSR. It was a big surprise to the Russians at the time, and its frontal armor was virtually impenetrable with the ammunition used. As so often in the history of war, however, new anti-tank guns and self-propelled howitzers appeared relatively quickly, which could effectively combat the heavy and less mobile machines. On this occasion, it turned out that the Panzerkampfwagen had another weakness - the thick, but upright (and large) front plates of both the turret and the hull. The *Tigers* also proved to be very vulnerable to side fire, particularly from the 122mm guns of the *Josef* Stalin tanks (IS), the American 90mm guns and even the 57mm anti-tank guns of the Allies. The Germans acted on that

Two ways: First, the armored fighting vehicle (the *King Tiger)* was rebuilt, and the armor was shaped accordingly to increase the likelihood of ricochet shots. Secondly, the tactics were changed - the Germans now tried to concentrate these Panzerkampfwagen in the main defense / main attack direction (in the latter case mostly in the second echelon!) so that they could be protected laterally by the *Panthers .* As part of this concept, “heavy tank battalions” were created, which carried out breakthroughs. Also, as with the latter variant, engine and chassis life was a significant constraint (the overlapping wheels wore out quickly and became a nightmare when they froze together). In general, this armored fighting vehicle was not particularly popular with the troops and was notorious for needing every free hour for repairs and maintenance. Another problem arose from the weight of the vehicle itself - in case there was a need to evacuate damaged tanks from the battlefield. There were only a few vehicles that could free such a 60-ton iron mass from the clamp, especially when the ground was difficult and the siding far away. It is important to know that under normal circumstances, if the enemy does not immediately occupy an area, most of the tanks hit can be towed away and put back into service (unless the entire ammunition stockpile detonates).

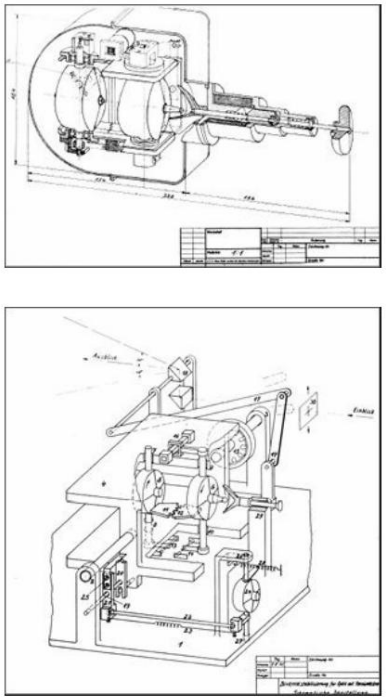
When looking at the *Panther F* from the side , the funnel-shaped casing of the cannon yoke catches the eye, based on the pattern of the *King Tiger.* (Archive)

An experimental 88mm self-propelled howitzer abandoned near Berlin. (Archive)

The *King Tiger* on the outskirts of Berlin. (Archive)

In the second half of the war, the *Tigers faced* a deadly enemy that was difficult to deal with. This was the IS-2 (122mm vs. 88mm), although its gun also had some of the limitations described in Volume I. Only the Jagdtiger self-propelled howitzers, which were armed with massive 128mm cannons, easily coped with the IS-2 . However, only a few of these were produced - only 48 pieces! Of course, this should not be taken to mean that the *Tiger* turned out to be weak in combat practice, after all the IS-2 and the 40-ton American *Pershings* (90 mm gun) were not standard tanks either, although the latter came into use relatively late . Even in the final stages of the war, the *tiger* was a weapon that instilled fear in the other side - particularly the Allies, as evidenced by the German driving a comparatively deep wedge into the numerous Allied forces in the Ardennes in December 1944.

The Americans described the King Tiger (official designation: *Pz. Kpfw. VI* ç, 8.8 cm *Kw.K.43* – L / 71, Sd. Kfz. 182) as "… tangibly completely new quality, with a gun that is characterized by a significantly higher bullet penetration than any other cannon mounted in a 360° rotating turret. It also has much more effective armor plating – not only in terms of its thickness (150mm for the upper and front hull plates), but also due to the slope of the armor plates, particularly in the front where the upper hull main body is tilted at an angle of 50° from vertical is."



Cross section of a German tank gun stabilizer. (NARA / CIOS)

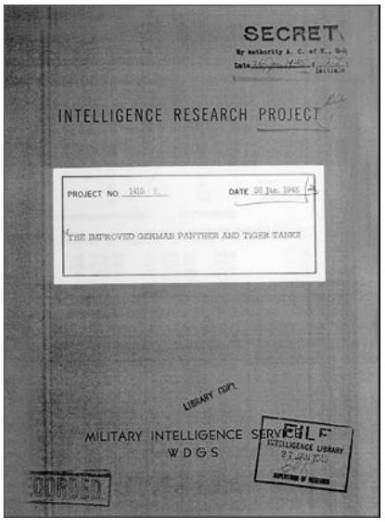
A little-known example of Third Reich tank technology - a self-propelled anti-aircraft vehicle armed with a 37mm gun. This picture was probably also taken in Lower Silesia. (Archive)

The report also describes the actual penetration performance of the *Tiger* 's 10 kg core rounds at various ranges. This is interesting in that I have not come across such information from any other source:

distance s] armor [mm]	bullet speed	Penetration with vertical [m] [m/	Penetration with armor tilted by 30°
457	942	218	179
914	886	200	164
1,372	832	183	150
1,829	780	168	136

2,286	731	153	123

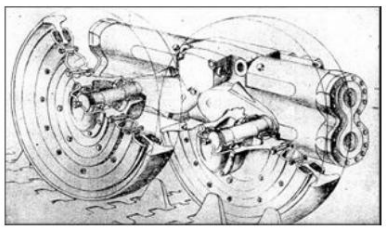
"Armor" here means a homogeneous plate of standard armor steel. Only by comparing the armor thicknesses of the main opponents can the given results be classified in concrete terms. The "most dangerous" enemy tank, the IS-2, had a 20 - 160 mm thick mantle ("streamlined" frontal armor, like most other Soviet designs), which is why the Russians around the turn of the year 1944/45 developed the modernized version IS- 3, in which selected critical armor elements were thickened to 230 mm (to a small extent, since the total weight increased by only about 500 kg to 46.5 t compared to the 68 t of the *King* Tiger).

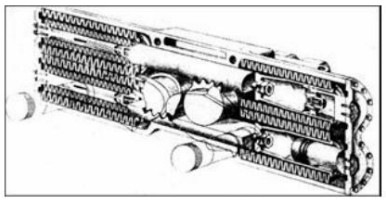


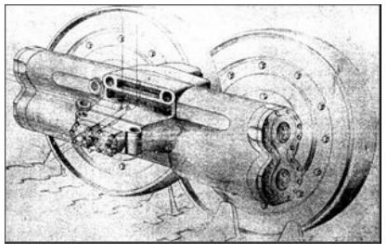
The front page of an American intelligence service report on the modernization of the *Panther* and *Tiger.* (NARA)

The heavy tanks of the allies turned out to be much worse. Of the British *Churchill Mk.3,* produced from 1941 until the end of the war, had 19-102mm thick armor. The American, somewhat over-hyped *M-26 General Pershing* (since in fact the first series was not introduced until the end of the war) had even weaker armor ranging from 13 (sic!) to 102 mm thick. The comparison with medium-class armored personnel carriers is only intended to satisfy the reader's curiosity - when it comes to armor thickness, all the "competitors" were both the *King Tiger* and, more importantly, it

is inferior to the *panther !* The only exception was the actually experimental Soviet T-44 tank, which was used in small numbers in the last months of the war. It featured identical armor thicknesses to the *Panther ,* ie 15-120mm. The already "famous" T-34 had an armor thickness of only 20 - 52 mm.
A modernized version armed with an 85mm gun had frontal armor, the thickness of which was increased to 90mm in some places (again increasing the overall weight by only about a ton). The *Sherman* was at about the same level (13 – 76 mm), and its armor was significantly worse than, for example, Soviet armored vehicles. It was relatively high. The cannon (75 or 76 mm) was theoretically comparable to the *Panther* 's armament , but only the versions introduced in 1944 possessed similar ballistic parameters. In simple duels in open country, where the *Panther* was directly opposite, the *Sherman* had little chance. To make matters worse, the soldiers nicknamed him *Ronson,* after a popular brand of lighter, because he caught fire easily after being hit. The Americans therefore tried to modernize it, so, among other things, in 1944 a version was hastily designed in which the armor thickness was increased to 140 mm at the expense of maneuverability. However, compared to the more mature representatives of the second generation of German tanks, it had another undeniable advantage - over 48,000 units of this model were manufactured, which exceeded the entire Panzerkampfwagen production of the Third Reich.



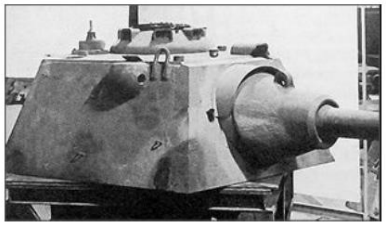




Cross-sections of elements of the suspension developed for the later Panzerkampfwagen E-50 and E-75, ie the respective successors of the *Panther* and *Tiger .* These were "heralds" of the first post-war generation of main battle tanks. (NARA / CIOS)

However, this book is not devoted to the record of war campaigns, but to the advanced technology that influenced technical development after the war. In this sense, the Germans clearly played a leading role. Suffice it to consider the German-American experimental tank Kpz.-70 / MBT-70 from the 1970s, which shocked the "tank world" with many revolutionary solutions - including turbine propulsion, hydrokinetic drive transmission, hydropneumatic suspension. All this was just an integration and implementation in production practice of all those solutions that were designed in 1944-45, when the third generation of German tanks was designed (mainly vehicles of the "E" series).

It is worth getting acquainted with another disclosed report describing the stabilized aiming devices of the Leitz company, as well as devices for stabilizing the gun while driving. 13 In this case, the designers took what was already (to a small extent) used in practice by the Allies and developed it further. In 1942, Afrika Korps troops captured a number of American M-3 tanks, essentially experimental vehicles fitted with gun stabilizers and similar sights. Supposedly, corresponding work had already been carried out in the Third Reich; however, it was the observations made in Africa that finally helped the breakthrough. The tank that was supposed to be modernized in this way was the *Panther.*



The turret in *version F* impresses with its simplicity and the small front profile.
(Archive)

[redacted]

Parallel to the advances in the construction of tanks themselves, signs of a breakthrough in ammunition became visible: e.g. Shaped charge ammunition was introduced, sub-caliber core projectiles with fin stabilization were tested (including with uranium cores - in Mielec), projectiles shown in the photo and built by Tromsdorff with additional ramjet propulsion were also tested, which were decades ahead of their epoch. (NARA)

The Leitz company from Wetzlar received the order for the production of the optical elements of the main telescopic sight, while the gyro system and probably also the execution system were to be produced by the Berlin company Kreiselgeräte. After the war, its chief designer (a certain Ernst Haass) claimed during his interrogations to have been the author of the first concept. Even before the war, he tried to interest the future American manufacturer (Sperry), but was not satisfied with the offer made by this company. During the war he learned that Sperry was beginning to manufacture a similar solution. Irrespective of this, Ludwig Leitz, one of the managers of the Leitz works, showed a kind of prototype of a relatively imprecisely manufactured device and claimed, quite surprisingly,

that it was a forerunner of their later design, captured in the USSR! So it cannot be ruled out that the German construction was in a certain sense of Soviet origin. This would not be the first case in which a solution already developed in another country has been improved: suffice it to mention the jet engine, invented in Great Britain by Frank Whittle.

Junkers, BMW and Heinkel improved the concept by abandoning the centrifugal compressor in favor of an axial compressor, effectively paving the way for post-war work. It was similar with the American *bazooka,* the model of which General Student's soldiers captured in Crete. The American grenade launcher was the prototype for the concept of rocket-propelled anti-tank weapons for infantry, however, it was characterized by low penetration (small caliber), accuracy and range, due to which in practice it did not play a major role in combating tanks - especially in the later years. On its basis, the Germans built the much better *Panzerschreck* grenade launcher with a caliber of 88 mm. Unlike the prototype, it could pierce the frontal armor of virtually any tank and set a precedent in that the infantry had never before had an individual (carryable by a single soldier) yet effective anti-tank weapon.

Some of the concepts implemented in the Third Reich have proven to be anachronistic

exposed, such as E.g. the huge railway guns, which had important advantages (the projectile could penetrate even 20-30 m underground and explode there at the depth of air raid shelters), these advantages came at very high costs. Such weapons soon gave way to tactical missiles, which were also introduced in the Third Reich. The photo was probably taken in Darÿowo (Rügenwalde), in the cartridge chamber of the 80 cm Dora gun. (Archive)

He had a significantly higher effective range than that *bazooka.*

One could therefore venture the assertion that work on armament stabilizers dates back to the pre-war period and was being carried out in several countries at the same time. The work on the stabilizer intended for the *Panther* was mainly carried out in Berlin and Themar near Meiningen, since Leitz basically limited himself to modifications of the existing sighting device. Unfortunately, all prototypes were destroyed before the end of the war. They were only examined in March 1945 at the test site in Kummersdorf near Berlin. According to Ernst Haass, Hitler himself was a witness to these attempts, and since they were very successful, he demanded the start of series production as soon as possible, which of course remained only a pious wish. According to the main designer, the tests showed that the shooting accuracy of the new system was about half a thousandth (it is likely that this figure referred to driving), which corresponds to an average hit error of 1 m at a distance of 2 km. If that's true - that is, if you can take the designer's opinion literally himself - that would be a very good figure, even long after the war. This was an average value measured after 10 projectiles had been fired. In the mentioned report it was emphasized that the American solution (with a different construction) achieved much lower precision. The original technical drawings that accompanied the American report were printed in the book. One of them shows the cross section through the optical block of the target device, the other the gyro main block.

Another US intelligence report on Armed Vehicles relates to the development of the E-50, E-75 and E-100 Panzerkampfwagen, which represented the third wartime generation of German tanks. Let's start with the heaviest of the three - the E-100. In the following, only the most important information is presented in abbreviated form

the E-100 has already been described in Volume I.

This armored vehicle was commissioned by the Army Weapons Office from the Adler company in Friedberg under the direction of a certain Dr. Jenschke and was intended as an alternative concept to the super-heavy *mouse .* Although work formally began on June 30, 1943, no prototype could be completed by the end of the war, as work was interrupted after about a year. The Allies found an unfinished prototype in Sennelager near Paderborn (Westphalia). The search for the construction plans revealed that all the documentation had been destroyed before enemy troops invaded. It was only after the war that Jenschke was able to partially reconstruct it from memory (!) based on measurements on parts that had already been completed and had been preserved. Much like the *mouse ,* the E-100 was a fairly original concept, although the engineering structure itself was classic. In contrast to the *Maus ,* only one but very large cannon (150 mm, 174 mm was also considered!) should be installed in the turret. For this reason, the main problem in the design of the E-100 was to provide enough space in the fuselage and turret for the ammunition, which was of record size. This in turn prompted the design office to look for changes in many classic design solutions. One of these was the abandonment of the then customary (and now standard) suspension on torsion bars running across the interior of the fuselage directly across the floor, which also resulted from the desire to install an access hatch in the bottom of the fuselage, which was the case with torsion bars would not be possible (this is not the case with modern vehicles either). It was decided to move the whole suspension outboard and the torsion bars were replaced with "old fashioned" springs. More interesting was the attempt to reduce the space occupied by the engine, rotating gear and drive transmission system - this enabled the development of the integrated powerplant. The gearboxes were integrated into the engine, resulting in a prototype of the modern "power pack". It was quite odd in this context that the track drive wheels were in the front even though the powerplant was mounted in the rear.

What caught the eye most about the E-100, however, was the very

heavy emphasis on maximum firepower at the expense of other factors that define a tank's worth (interior protection and manoeuvrability). This is evidenced by a cannon with projectile kinetic energy several times higher than that of all vehicles already produced (!), but e.g. E.g. that maneuverability was only secondary - the Panzerkampfwagen would have the same engines as the much lighter E-50 and E-75, the new counterparts of the *Panther* and *Tiger.*

According to the main designer mentioned, this was of course not his own initiative, but the criteria that had been specified by the Army Weapons Office in the specification. Jenschke claimed that the new vehicle was doomed to fail even before the design phase. The specifications meant, among other things, that despite the huge turret dimensions, there was no space for the crew, ie for the commander and the loader! In any case, as it turned out in the course of the work, there was no way that the loader could load the gun if he himself was sitting in the turret.

It was just that there was room for either him or the missile loaded into the cannon, which wasn't much shorter than a human, by the way. Of course, the question arises as to the specific reasons for the requirement to use armament with a caliber almost twice that of the *Tiger .*

The interruption of work in 1944 arose in a certain sense from the need to answer such questions. The work was not resumed, but the company spoke of a redesign of the vehicle. Specifically, it was about replacing the tank turret with a kind of immobile hull structure. The proverbial and real bottleneck was the bearing on which the tower turned. Such a solution seems much more sensible, by the way, all the more so since the E-100 - like the *Maus* - wasn't intended to be a tank in the literal sense anyway, but rather some sort of self-propelled (albeit slow) combat bunker. On this occasion, the drive wheels placed at the front were supposedly to be replaced by normal rear ones. Eliminating the turret commonly found on tanks would certainly have reduced design weight, cost and simplified production.

The last factor was considered in all new generation tanks

decisive, also for the E-50 and E-75 vehicles described below in abbreviated form. 14, 15 They should get the same engine as the E-100, type had not yet been approved, so there were preliminary plans to use Maybach HL-230 engines (previously used in the *Königstiger, Jagdtiger* and *Sturmtiger* vehicles). Similar to the E-100, the suspension has also been completely moved to the outside. In keeping with German 'tradition', overlapping pairs of wheels on Belleville springs were provided - a total of 6 wheels on each side on the E-50 and 8 each on the E-75. The phenomenon of far advanced standardization, which was unprecedented in the production of armed vehicles in the Third Reich, can also be seen in the example of hull construction. In general, they differed in size, but the basic parameters were all identical: the inclination of the front upper fuselage plate was 60°, that of the lower front plate and the upper and lower rear plates each 45°. Even the fuselage bearing treads under the turrets were the same on the E-50 and E-75 - in theory, the turrets could have been mounted alternately! A similar electric tower drive was envisaged in the horizontal plane. The turrets were designed and probably manufactured at the Krupp works in Essen, but the Americans were unable to determine how advanced the work was. Concrete data on the armament are missing; it cannot be ruled out that the calibers of the guns would be the same (at least for the time being) as on the *Panther* and *Tiger .* Both types mentioned were to have suspension in the form of built-in shock absorber blocks placed lengthwise on the fuselage sides. Each "block" would have included four oil-immersed springs connected to two impellers. Interesting was the use of a central oiling system that would supply oil to all shock absorber blocks, both to dampen shocks and to lubricate the bearings and other moving elements. Such a suspension was, of course, a further development of the carriages (e.g. from the interwar period), which were each equipped with two wheels. However, the solution as a whole was quite original, however, it was much more complicated than torsion shafts, which did their job perfectly.

Another fact is also interesting: Jenschke, the author of a plant

to one of the reports, suggested that the Americans start production of the E-50 and E-75 as soon as possible. Maybe as a tank of a new German army?

Submarines from Lower Silesia

Submarines are usually associated with large shipyards covering many acres and lots of sidings, slipways and the like. own. In a way, that was the main weakness of German underwater weapons: the existence of huge industrial complexes that provided an ideal target for carpet bombing. When designing the second-generation Type XXI ocean-going warships, the Germans decided to change that. The concept of modular construction was used for the first time. A large ship with a displacement of several thousand tons was now being built by many plants scattered across the country. They were connected by canals and rivers on which barges could carry completed hull segments. In a classic shipyard, only the relatively simple and not particularly time-consuming final assembly was carried out. So it turned out that Type XXI submarines - one of the "technical marvels" of World War II - were mainly built in Lower Silesia.

Some time ago I was leafing through the files of the Polish Home Army's "industrial espionage" and came across interesting reports that I would like to quote below. 16 In April 1944, reports were made about the production of some modules of the units mentioned:

> “12 bows for XXI type submarines (observed in the Pÿock river shipyard). Dimensions: 17 m long, 7.5 m high, width unknown. Total length of the submarines about 100 m. Each bow is equipped with 6 torpedo tubes and weighs about 115 tons. special stage [ie priority]: SS. Plating of 8 mm and 12 mm plates; the whole bow is welded. The shipyard produces two parts: sections 8 and 7.

The companies involved in the production of the bow (submarine program – a total of around 140 boats) together with their percentage participation in the production process: • Bauchelt and Co. Grünberg [Zielona Góra] – 26.4 percent; • Prämba and Freudenberg, ÿwidnica - 13.3 percent; • Agefko Dr. E. Schneider and Co. Litzmannstadt [ÿódÿ] – 5 Percent;

• Adolf Irle, ÿychlin Kr. Kutno – 4.6 percent; • VOH Donnermarkshütte Hindenburg OS plant – 8.3 percent; • Carl Wolffgramm Nieder Salzbrunn, Silesia [Szczawno Zdrój near Waÿbrzych / Waldenburg] – 3.0 percent; • Schles. Steamer Co. Berlin Lloyd AG shipyard Ursetten b. Glogau [Gÿogów] – 24.4 percent;

• Waldemar Schütz Rogassen district of Warthegau [Rogoÿno] – 0.6 percent

• Weichselwerft GmbH, Schröttersburg [Pÿock] – 14.4 percent.

The Buge production program was as follows: in I [in January?] - 8 completed, in II - 12, from III to VII 20 each, in VIII - the rest.

The company Siegener AG Geiswald, district of Soegen [district of Sagan? – ÿagaÿ?] bends and presses the plating. The shipyard in Pÿock is preparing the foundations for a crane that will be used to manufacture and load the finished bows.

The first two bows are to be shipped in IV'44, but the organizational state of the shipyard will not allow this. The bows will be transported to the sea by two barges that have been converted for this purpose."

However, this report misses a rather interesting motive connected with Wroclaw itself, the capital of Lower Silesia. It is not certain whether elements for submarines were actually manufactured there, but many indications point to this. Piotr Maszkowski of *Odkrywca* ("The Discoverer") magazine attempted to investigate these leads and described the results of his investigations in a vor

articles published several years ago. quote: [17] I want short excerpts from it

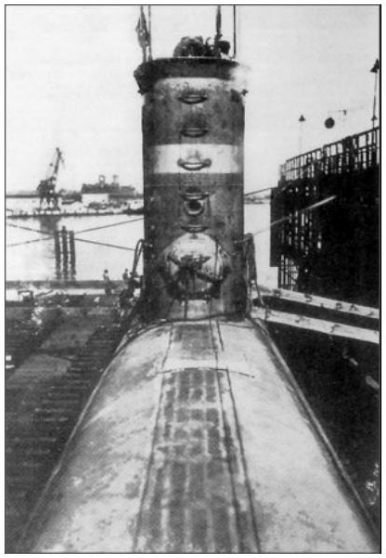
A Type XXIII coastal submarine during tests in the summer of 1944. (Archive)

“For several decades, the story of the construction of bows for submarines and their transport on the Oder towards the Baltic Sea has been making the rounds in the capital of Lower Silesia. The equipment is said to have been completed on the individual sections of the river in order to finally make the submarine ready for service in Stettin. However, this very laconic tradition arouses many emotions and at the same time controversy, since it has as many supporters as opponents.

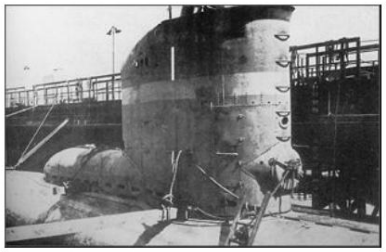
Therefore, let's try to verify the above information based on existing knowledge and sources. Unfortunately, a big surprise awaits us here. Although Wroclaw certainly had the appropriate industrial infrastructure and the necessary base for the construction of submarine bows and individual elements of equipment during the Second World War, we lack any knowledge about it. There are only enigmatic reports about the production of the individual companies, with only a few sentences in general elaborations devoted to the subject. […]

In the book 'Historia Wrocÿawia' ('The History of Wroclaw') by Teresa Kulak we find a trace of the production of prows for submarines

in a river shipyard on Kwidzyÿska Street in Wrocÿaw. It's only a sentence, but armed with that argument we can follow the trail. When historians write about bow production in a river shipyard, there must be something to it. Especially since there are also some reports of constructions that are reminiscent of bow sections and are said to have been on the shipyard site in the 1990s. However, a visit to the shipyard and discussions with the oldest employees could not confirm this. […] The only trace in the form of the sentence we already know about bow production can be found in a contemporary elaboration on the history of the shipyard. […] The folder of the district office for liquidations, which took over the industrial plants after the war, does not provide any concrete information either. […]



A Type XXIII submarine at the Gdaÿsk Shipyard, in the process of being completed. The Allies received technical details about these submarines mainly from the intelligence service of the Polish Home Army. (Archive)



Since there are traces of the assembly of certain assemblies for submarines in Wrocÿaw, it is difficult to overlook the connection with an object that still exists in the capital of Lower Silesia to this day, which almost literally seems to have been taken from a submarine, although it is is a little camouflaged. It is located in the yard of the Technical University for Inland Navigation on Brückner Straße, which is nomen est omen about 150 m from the mentioned river shipyard. […] In one of the 1960s issues of the magazine 'Morze' ('The Sea'), the author, describing this rather mysterious object on the occasion of a report about the school, classified it as a model of a river boat.

Well, even for that time it must have been an unusually futuristic ship. A woman who was interviewed several weeks ago in the school office described the object with a certain nonchalance as a kind of dummy. Only the school teachers with a longer professional experience brought up the hypothesis that it could actually be an earlier conning tower of a submarine. The ingenuity of several years of school workshops naturally brought with it numerous modifications, which on the one hand made the appearance more attractive, but on the other hand also masked the progressive corrosion. It is also quite mysterious how the conning tower came to be on the site of the Technical University for Inland Navigation. The first story says that one of the first years had just transported it from the nearby shipyard, another that it was shown at the Recovered Territories Exhibition in early 1948, whence it came to the school grounds. How it really was is unknown. The problem is getting directly to people who can remember the oldest history of the school."

A Type XXI deep sea submarine after the war. (Archive)

The Red Army intelligence report quoted above states that the plants located in present-day Polish territories also played an essential role in the production of Type XXIII coastal submarines, which were just as modern as the Type XXI. The cities of Pÿock (production of segments) and Gdynia, specifically the former Polish Navy shipyard, where segments of various types were manufactured, dominated here. Of the approximately 6,500 employees in February 1944, only about 15 percent were of German nationality (mainly specialists), the dominant group was still Poles! Incidentally, shipyard manager Burchardt was a Silesian who spoke Polish fluently – which, however, was no obstacle to accepting him into the NSDAP. Segments for Type XXIII submarines were probably produced in Gdynia, which were then assembled in Gdaÿsk, Elblÿg and Szczecin. A separate part of the report of the intelligence service of the Polish Home Army was devoted to the involvement of the Pÿock shipyard: “20 Type XXIII submarine bows.

> Bow dimensions: 10 m long, 4.5 m high, 2.5 - 3 m wide. Total length of the submarine about 50 m [in reality it was only 34.7 m]. Bow equipment: 2 torpedo tubes; Bow weight: 28 t. Degree of importance: special level DE (German invention). The direct order was placed by Deutsche Werft Kiel, and the indirect order by OKM. Sheet thickness: 6 and 8 mm. The bow built by the shipyard consists of two parts: the actual bow, which is manufactured by the shipyard (16.5 t), and the pressure hull welded to it (11 t), produced by the company Bauchelt & Co. Grünberg [Zielona Góra], Silesia. The construction is completely welded.
>
> The lack of specialists and electrodes greatly complicates an accurate and adequate performance of the work.
>
> The shipyard was to ship three bows in February, four each in III and IV, and three each in the remaining months. So far not a single one has been shipped, one is complete but it turned out to have poor welds. The X-ray was taken to Gdansk for examination. Two other bows are being welded to the pressure hulls and six more are in the works.

According to the order planning of the engineering office 'Glückauf', Halberstadt, 6,000 hours are necessary for the production of the bow and the welding with the pressure hull. Addresses of the companies involved in the construction of the Type XXIII submarine: • Beuchelt and Co. Grünberg (Silesia), • Siegener AG for iron construction, Geiswald district of Soegen [?], • Ottensener Eisenwerk Dept. Shipyard, Hamburg , • Germania Werft, Kiel, • Carl Spaeter, Hamburg."

A few additional words about the second jet fighter generation

In the first two volumes of the "Truth About the Wonder Weapon" the German work on jet aircraft was described in two chapters. It is a very comprehensive set of questions that is by no means limited to the Messerschmitt Me-262. What seems most interesting from today's perspective is the fact that in the last two years of the war work began on the second and third generations of fighters of this type - the second generation includes all those concepts that differ in their design and aerodynamics went a little further (e.g. the Messerschmitt P-1101, the Ta-183 and the Ho-229). It is interesting that although the first two concepts were continued after the war in the form of the American F-86 *Saber* and the Soviet MiG-15, the tailless Ho-229 was not further developed despite very good flight performance. This is not an isolated example, as none of the third generation aircraft mentioned below had a post-war 'offspring', although they were interesting and promising concepts. However, they were quickly shelved as "unconventional" (which is good evidence for the theses mentioned in the introduction). Since there is no universal classification, in my opinion aircraft that have a speed close to that must be counted among the third generation

reached the speed of sound or supersonic speed, above all the machines with advanced ramjet propulsion (the P-13b from Lippisch and the Ta-283 and the *Triebflügel* from Focke-Wulf).

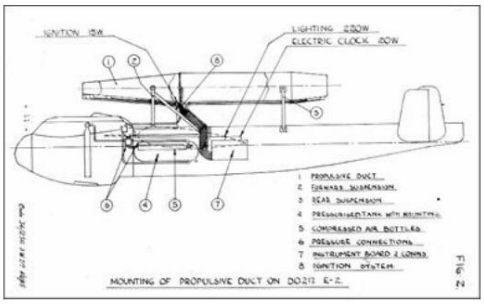
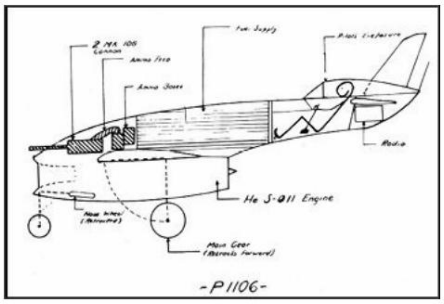


Diagram of a system for examining ramjet engines from the company Sänger on a Do-217 – sketch from an Allied report. (NARA / CIOS)

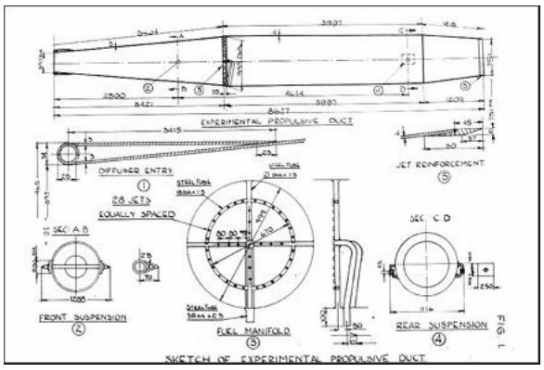


A sketch from an Allied report showing the construction of the Messerschmitt P-1106 fighter. (NARA / CIOS)

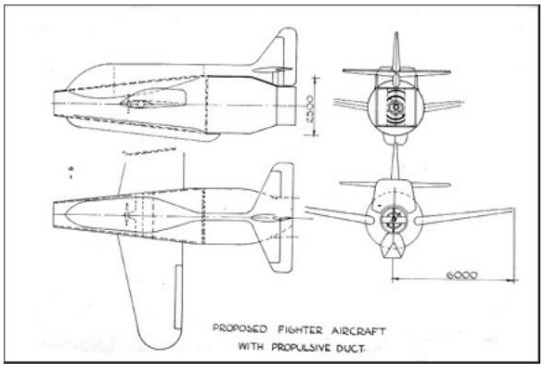
This time I want the previous descriptions just a few complete supplementary information from new sources. [18, 19, 16] Let's start with a report from US Military Intelligence. It is dedicated to four concepts representing the second generation of Messerschmitt jet aircraft: the P-1101, the P-1106, the P-1110 and the P-1111. [18] These aircraft were intended to be simpler than the Me-262: their aerodynamics were designed from the outset with high-speed flight in mind, and they were to be powered by more modern engines with lower individual fuel consumption.

It was specified that the range and flight duration of the Me 262 had to be preserved. There were three prototypes under construction that were in competition with each other, then the decision should be in favor

the aerodynamic configuration that would have best met the requirements. The information described in the report was obtained by interrogating W. Voigt, the head of Messerschmitt's research office in Oberammergau.



Schematic of the Sänger ramjet. (NARA / CIOS)



Cross-section of a ramjet-powered fighter concept developed in the Skoda works in cooperation with the Waffen-SS command. The aircraft was to be fitted with a Sänger ramjet, which turned out to be a complete failure. Other designers of drives of this type (described in Volume I) had a better intuition. (NARA / CIOS)

Work on the concept of the P-1101 began on the personal initiative of Prof. Willy Messerschmitt, so that relevant data (mainly aerodynamic) could be obtained on a wing optimized for high flight speeds - hence the "adjustable" wing with variable sweep. It is known from numerous post-war publications that the Allies came into possession of an unfinished prototype which, among other things, was missing the engine. However, the report noted that there was also a completed prototype that was built prior to the arrival of the front in the

was blown up. It possessed a mounted Jumo 004 engine, which was to be replaced within a few months by the final, much more powerful Heinkel-Hirth HeS 001 engine.

The P-1106 had a similar configuration, but the pilot was not supposed to be on the nose cone above the engine air intake, but almost on the stern. The work on this model was interrupted at a relatively early stage due to the expected similar flight performance, but a much poorer view from the cockpit.

A concept of the Junkers EF-132. (Graphic: Marek Ryÿ)

The first of the planned modernization phases of the Me-262: the HG II version. (Graphic: Marek Ryÿ).

The main differences between the P-1110, the P-1111 and the P-1112 were the placement of the engine and the way in which the compromise between a classic and a tailless aerodynamic system was solved. Here the last two concepts stood out, the

without a tail section and were characterized by large-area wings with a large sweeping leading edge. They differed only in details, which were mainly due to the different placement of the fuel tanks. Also interesting was the concept of the P-1110, which used a groundbreaking solution. It was based on sucking in the near-wall layer of air on the wings, which should also "relieve" the engine air intake(s) (depending on the version). The wings should come from the P-1101 after certain modifications. This is the little new information contained in the cited report. Another interesting element is the parameters and expected flight performances of the aircraft mentioned, although none of them took off before the end of the war.

(Note: The P-1101 was used post-war in the US under the designation *Bell X-5* , which brought to light significant stability issues that eventually led to disaster.)

Identical difficulties, albeit to a lesser extent, were encountered with Focke-Wulf's similarly built Ta-183, which was a 'competitive concept' and took off in Argentina under the designation *Pulqui II* – but in this case it managed to overcome the problems to solve. Here are the technical details that allow the different concepts to be compared, at least in a rudimentary way:

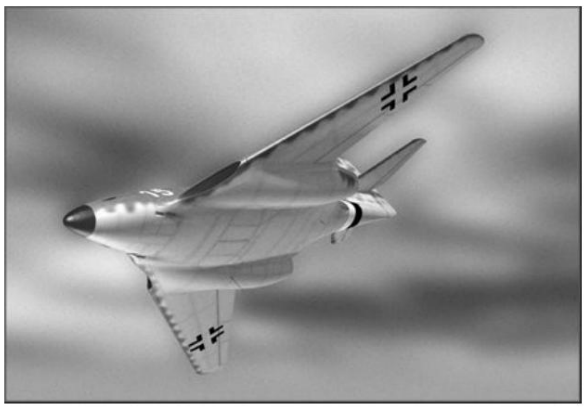
Another American report is dedicated to the work on the ramjet engine, which was carried out in the "German Research Institute for Gliding" (DFS) in Ainring. 19 Compared to the corresponding chapter in Volume II, describes the early stages of work, which otherwise concerned relatively simple, if not elementary, concepts. Only a few interesting technical drawings were added to the report, which were printed in the book - including a drawing of an experimental setup on Dornier's Do-217 and a concept sketch of a Skoda jet fighter that was to be equipped with such a drive.

The Concrete Fleet

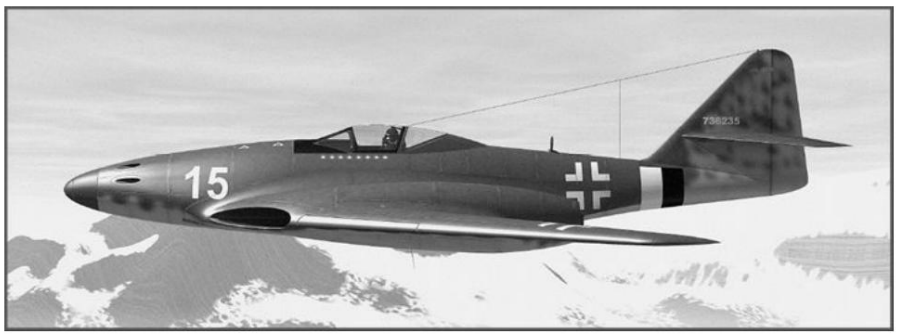
Volume I of The Truth About the Miracle Weapon contains a very short one

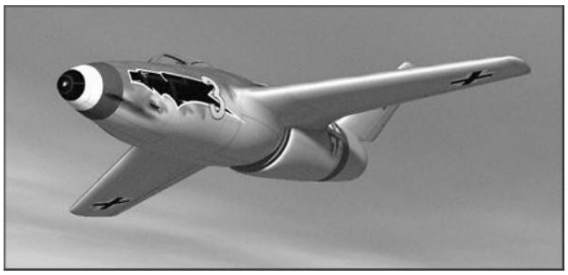
Chapter on the construction of seagoing concrete ships in Darÿowo (Rügenwalde). Since that time (2001) I have managed to find many new sources on this forgotten and unusual complex of topics, which allow to supplement the description somewhat.

P- (with the HeS-011 engine, according to the expected engine power)	**P-1101**	**P-1110**	**P-1111**
wingspan	approx. 8 m - depending on the arrow shape, from 10 m	approx. 8 m - depending on the arrow shape, from 10 m	8.0m
length			6.5m
Height	2.8m	2.8m	2.5m
fuel tank volume	1,000 or 1,200 l	1,000 or 1,200 l	1,200L
wing	2 13 m	2 13 m	24 – 27 m ^{2} (various Wing concepts) 40° or
leading edge sweep	35° - 45°	35° - 45°	45°
starting weight	3,800kg	3,960kg	3,840kg
Flight duration at sea level Flight duration at an altitude	40 mins	40 mins	
of 10,000 m 108 min		108 mins	108 mins
Flight range at sea level Flight range at an altitude of 10,000 m	500 km	500 km	500 km
	1,500km	1,500km	1,500km
Max Airspeed	975 km/h at 8,000 m	1,000km/h	1,000km/h
cruising speed	910km/h	940km/h	940km/h
landing speed	180km/h	180 km/h (with 20 % fuel)	165km/h
runway length	800 meters	800 meters	640 m
peak height	12,000m over 12,000m		—
wing loading	290 kg/m ^{2}	300kg/m ^{2}	160 kg/m ^{2}.
Rate of climb at sea level	25m/s	25m/s	—
Time to reach an altitude of 2,000 m	1.5 mins	—	—
Coefficient of shear force / self-weight	0.49	—	—

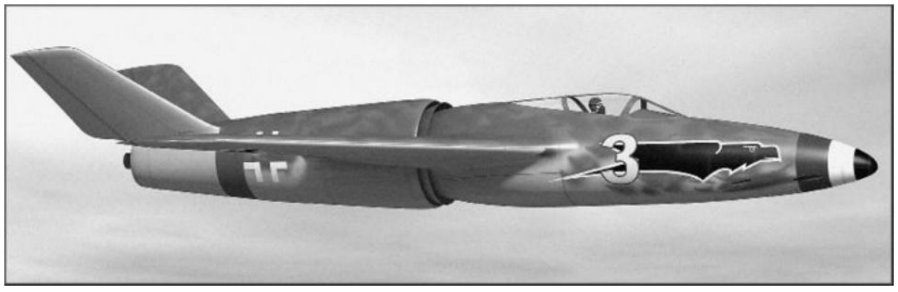


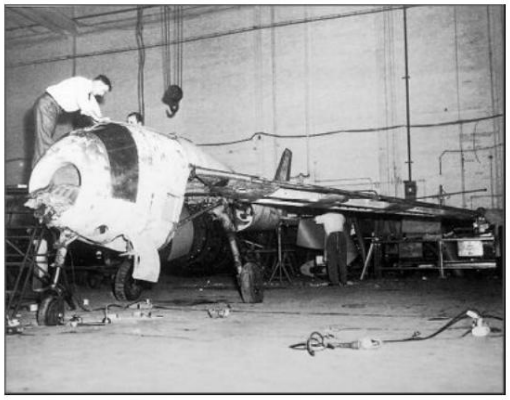
The Me-262 HG III should be equipped with a modern wing with less aerodynamic drag and a larger wing. (Graphic: Marek Ryÿ)



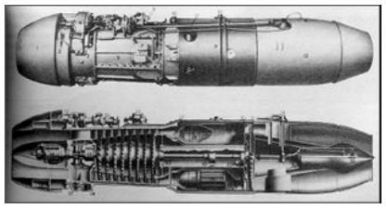


One of Messerschmitt's most interesting concepts as part of the second generation of jet fighters: the P-1110. (Graphic: Marek Ryÿ)

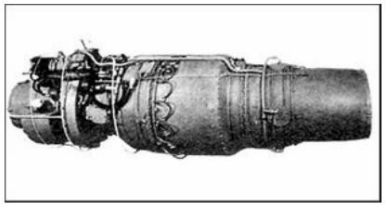


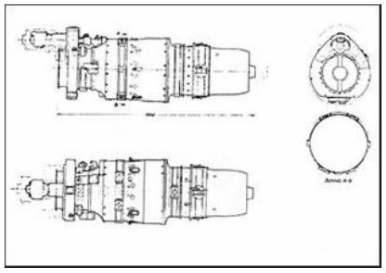


A factory photograph of the Jumo 004B jet engine and cross section.
(archive of the author)



A photo of the HeS-011 engine.



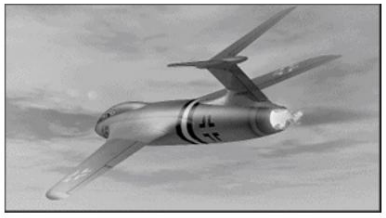


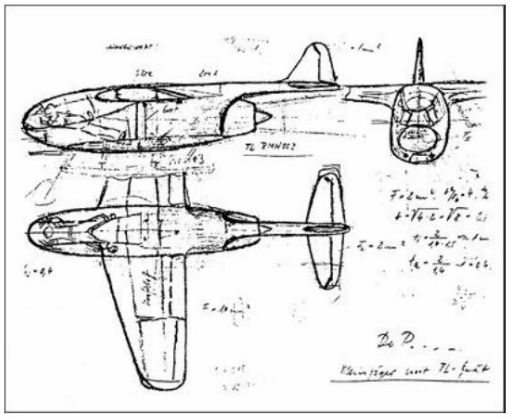
Plans of one of the Heinkel/Hirth HeS-011 engines intended for the second generation of Luftwaffe jet fighters. (archive of the author)

A prototype of the Messerschmitt P-1101 after being transferred to the USA and fitted with a new engine (probably of the *Nene type).* (NAIC archive)

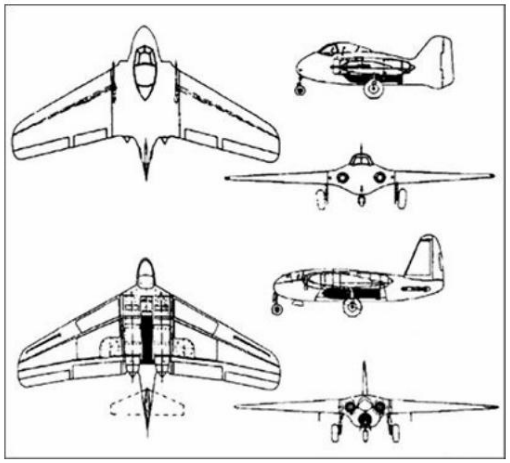
The P-1101 was flown in the USA under the designation *Bell X-5* Probe. The Americans have "advertised" this aircraft on almost every occasion as their own groundbreaking concept. (NARA)

The concept of a heavy interceptor, which was only given the alias *Destroyer .*
(Graphic: Marek Ryÿ. Note: The graphic on the front cover shows another
interesting concept: the P-13b in a triangular version described in Volume II.)

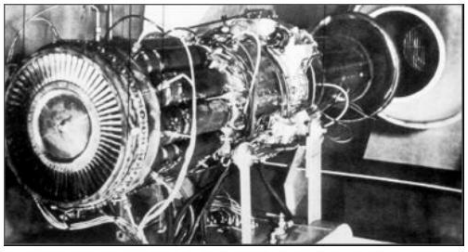




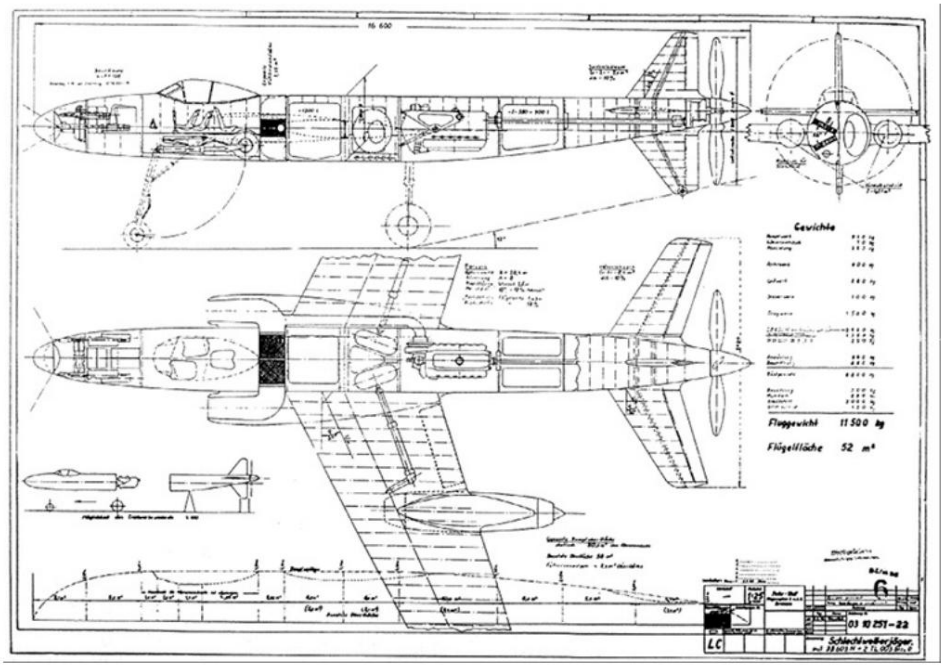
Preliminary *design* of Dornier 's light people's jet fighter from 1944. (Archive)



Original plans found in the archive, probably relating to concepts of Messerschmitt light jet bombers - the drawings were without description. (NARA)



The prototype of the HeS-30, another engine for second-generation jet fighters. A comparable engine (DB-007) was also designed in the Daimler-Benz works. (archive of the author)

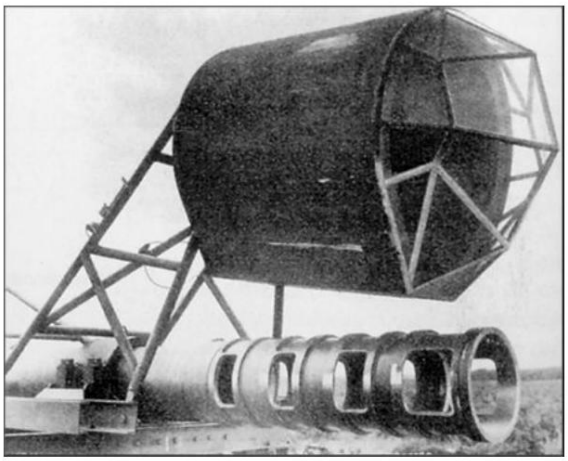


Original plans of one of the most unusual concepts of the Third Reich – the Focke-Wulf heavy night bomber with hybrid propulsion in the form of a piston engine driving the compressed air screw and two BMW 003 jet engines, which were to be used mainly for takeoff and during combat. (archive of the author)

The Germans were just one step away from breaking the sound barrier. This would have e.g. For example, the DFS-228, an experimental rocket-propelled stratospheric reconnaissance aircraft, intended to take off from the “back” of a Do-217. (DFS archive)

This photo of a little-known transport aircraft developed by Reimar Horten in Argentina after the war is a good example of the fact that many concepts dating back to the Third Reich were not realized until after the war. The concept was based on an unrealized design of the wartime Ho-18, known as the

strategic bomber intended to carry weapons of mass destruction (this may have been the same bomber whose startling description can be found in the "Supplement"). In the Argentine city of Córdoba, a fuselage was added to the wing to act as a cargo compartment. The aircraft was given the designation IAe-38. Most of the people posing for the picture are German specialists. (archive of the author)



This photo shows in how many directions the work was carried out at the same time. It is a research setup showing the mating of a Do-217 (the cockpit mockup is shown) with a 355.6mm caliber recoilless gun. (Marek Ryÿ archive)

In June 1942, a special committee was created in the Third Reich to deal with the construction of such units, since steel was mainly used for the armaments industry. The committee was called the "Special Committee on Concrete Shipbuilding". The prominent engineer Ulrich Finsterwalder was designated as head. [21] The Germans based this on experiences that date back to the 19th century. In fact, the first small river unit of this type was built in France in 1854! Even before the First World War, comparable concepts were implemented in the USA, Italy, Germany, Norway and Holland. The Second World War created the conditions for a renaissance of this concept. In 2006 I managed to get hold of an Allied intelligence report that describes this complex of questions in a somewhat more comprehensive manner; it is also referred to as the *Baltic Sea Secret .* 20 It turned out that such ships and barges were not only created on our Baltic Sea. Here is an excerpt from the original text:

“The construction of concrete ships in Germany was a makeshift venture. Two tankers with a water displacement of 3,000 t each were built, which were lost. There was also a thousand tonner in Vienna, unfinished 700 ton units and 750 ton river barges which were heavy but not particularly strong. There was a 3,400 t Baltic Sea tanker […] and a 3,700 t cargo ship […]

A 700-ton Taubert ship. Hellmann and Littmann designed the hull for a Taubert ship on the Weser. It is unclear whether it can be completed. 700-ton river barge. Two river barges, each weighing 700 tons, were built at the Heuer works in Paris. They were lost due to acts of war. They could withstand normal loads and were distinguished by the appropriate elasticity. However, the required resistance to isolated impacts was not achieved.

A 180 t pontoon. Apart from the river barges, a steel-walled pontoon was also built. […]
shell constructions

- A 3,400 t ocean-going tanker.
- Rügenwalde / Baltic Sea - 1 tanker, • Warna / Bulgaria - 3 tankers.

After twelve months of building the hull and 13 more months, which were necessary for equipping and assembling systems, the ship from Rügenwalde was completed in the Stettin Vulcan shipyard.
Shortly before its sea trials, it was hit by a heavy bomb and damaged, resulting in the rupture of the nave. However, it is possible to repair the ship and restore buoyancy. As far as is known, the ship is still in ÿwinoujÿcie, where it could be towed without any problems despite being severely damaged.

In September 1944 the first tanker was launched in Varna. The events of the war prevented the launching of the other two tankers.

A 3,700 t motor freighter. In 1944, two cargo ships with a water displacement of 3,700 tons each were completed in Rügenwalde, which took ten months. They were to be transferred to Copenhagen to be outfitted and outfitted. However, the end of the war prevented its completion. It is assumed that the freighters from Rügenwalde were brought to Russian ports.

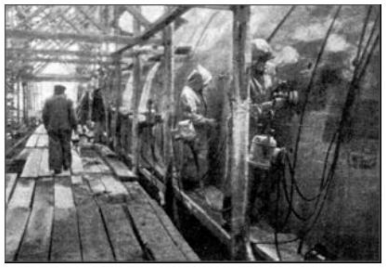
A 1,000 t barge. Two of these units were built in Neuss am Rhein, another eight in the Neusatz shipyard on the Danube. The Neuss shipyard was badly damaged by repeated air raids.
Nevertheless, the ships could be built and transported to the Gustavburg shipyard in Mainz to be outfitted. In principle, an inland barge could be completed and was then used by American pioneer troops for bridge construction. The second unit was put out of action by German troops in Schierstein. An efficient system of series production was worked out in the Hungarian Neusatz shipyard, which made it possible to produce one barge per month. Four units were equipped and delivered. They were used as railway ferries in the lower reaches of the Danube in the direction of Belgrade. When Hungary capitulated, the three remaining barges were being equipped.

It is assumed that they were heading towards Austria. In this connection it is interesting that during this voyage one of the barges ran into a mine – the explosion occurred under the bow.
The ship was able to pull ashore and was repaired while afloat with concrete capable of setting underwater. An area of about 12 m2 was damaged. Only part of the concrete was torn out of the reinforcement, which gave way in some places. The rebar was not torn apart. A parallel steel barge of the same size was subjected to comparable blast energy, resulting in a leak, after which it broke up and sank in the canal.

A 300 ton motor freighter

This type of ship intended for coastal navigation was
Ostswine, Larvik, Rotterdam, Neusatz, Nussdorf and Perama in series

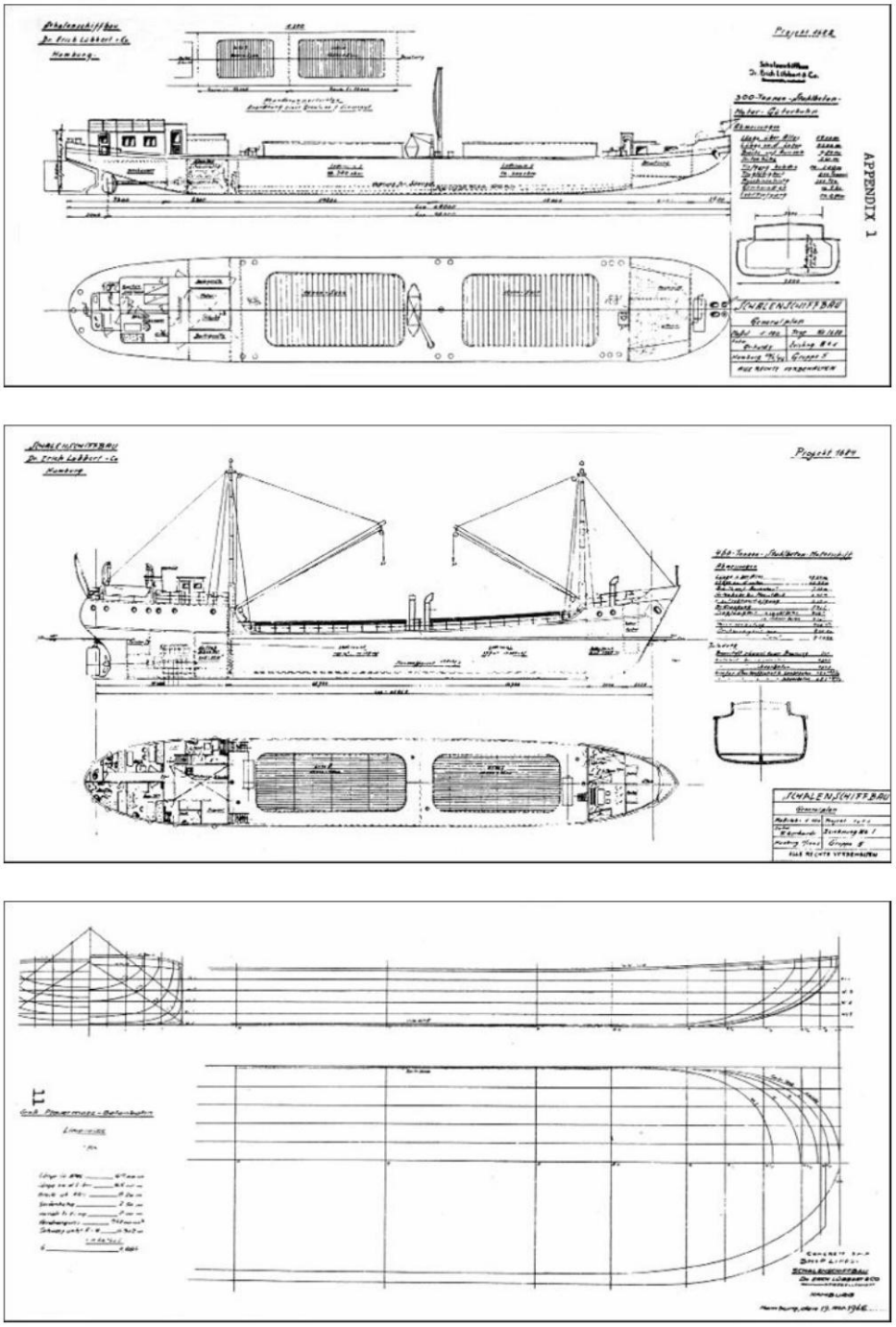
produced. About 50 Buge were made, of which 25 were used. It should be noted that only a limited number of small and secondary shipyards were available to outfit such ships. Nevertheless, it was possible to achieve a monthly production of around two to three pieces, especially in Rotterdam and Ostswine. The relatively limited production of concrete ships, their unusually long construction time and the increasing number of technical defects were mainly due to the fact that the ships were not built by shipyards but by cement factories. More effort was put into making the bows than into equipping them with engines, auxiliary systems, etc. As a result, it turned out that not only the wrong engines were chosen, but also the wrong on-board equipment was installed."



Completion of the concrete hull turned keel up. The photo shows workers polishing the concrete with hand grinders. (archive of the author)

Some time ago I was contacted by Aleksander Ostasz, the editor-in-chief of *Magazyn Nurkowanie* ("Diving Magazine") magazine, who has long been fascinated by the somewhat "inscrutable" issue of building concrete ships in today's Polish territories. He was interested in the documents I had brought back from the US, but he also had a great deal of his own to offer, including knowledge gained from researching the wreckage of such units, and excellent quality photographs. He also wrote a very interesting article on the topic.

[21] This article is important because it makes it possible to supplement the sources with practical knowledge. It reads, among other things:



Some original concepts of German concrete ships. (NARA / FIAT)

“Currently, the best-preserved concrete wreck in Poland is in Lake Damm near Szczecin. This approx. 90 m long freighter was built in Darÿowo (Rügenwalde). In 1944 it came to Stettin, where it could never be completed for various reasons. After the war it was to become an urban recreation and

Swimming pool complex to be remodeled but the concept was scrapped due to the cost. Fortunately, the wreck escaped destruction. In the 1960s it was moved to the northern part of the Dammsche See near Inoujÿcie (formerly Ihnamünde) and left to its own fate. The second surviving concrete ship is the wreck of the tanker 'Ulrich Finsterwalder', located off Grodno near Miÿdzyzdroje (Miÿdzyzdroje). The unit was launched in Darÿowo in 1943 as the first in a series of tankers. The almost 100 m long concrete hull with a volume of 2,947 GRT was brought to Szczecin to assemble the remaining equipment, engines and deck structures. on the 30th

On August 1, 1944, when the ship was almost ready, Allied bombers appeared over the harbor. The 'Ulrich' was severely damaged by carpet bombing. At the end of 1944 it came to Swinemünde, where it was repaired and stayed until the end of the war. The retreating Germans sank the tanker in today's Piast Canal (Kanaÿ Piastowski), effectively blocking the shipping channel to the port of Szczecin.

After liberation, the wreck was salvaged and taken to the Pomeranian Bay in the Misdroy region, where it was sunk again near Grodno. This place was probably chosen as the most isolated and farthest from the fairway, perhaps even then people thought of protecting the local cliffs.

The wreck of a concrete unit on the Dammsche See near Szczecin. Apart from the damaged bow, it is in relatively good condition. (Photo: Aleksander Ostasz – www.nurkowanie.v.pl)

The concrete ship is currently lying on the flat keel with the bow towards the shore, the sea depth around the wreck is 8 to 10 m. When the water level is low, the upper deck can be seen, which is often lapped by waves. However, the war damage, the tide of time and storms are not without consequences: the wreck is being destroyed more and more."

Beyond that, as I mentioned in Volume I, is the wreck a large concrete unit part of the breakwater in Darÿowo.

Advanced concepts of the Reichspost

The role of the Reichspost in the armaments and research efforts of the National Socialist state is rarely discussed. For this reason alone, it is worth dealing with this topic. It would of course be wrong to say that this was a key role, but it shouldn't be underestimated either. Incidentally, we are dealing with a general phenomenon here: it becomes clear how strong the efforts were basically to get involved in the research sector, since this guaranteed a corresponding influence. This influence can be understood in two senses – both in terms of political prestige (e.g. scientists involved in the most important projects were treated almost like princes) and literally when it came to the flow of funds, since in such cases this inflow could not follow the rigid rules that applied to the financing of armaments production.

On January 1, 1937, i.e. before the war, the Reichspost founded a research center that was closely linked to the war preparations. In a short time, the number of employees there exceeded 1,000 people. Initially, the Hakeburg near Berlin was the main place of work, but construction of a larger research center in nearby Kleinmachnow soon began. Such a rapid “promotion” of an institution, which theoretically should have nothing to do with this area, was mainly due to the personal ambitions of its director, Wilhelm Ohnesorge. He was a physicist and therefore mainly interested in work in this field - the use of television technology in the field of guided weapons relatively quickly became his "hobby horse".

The research aircraft of the Reich Postal Research Institute, which was used, among other things, for examining TV seekers. (Archive)

In doing so, he made use of the good reputation he enjoyed with Hitler and those around him. He also quickly became the object of the Reichsfuhrer SS's efforts and maintained good contact with him. As a result, the Kleinmachnow institution could not complain about the lack of orders, and its role was constantly growing. By the end of the war it was already involved in 50 "research areas", including nuclear physics (including studies of the ionosphere), radar technology, the development of remote-controlled combat vehicles, anti-aircraft armament, infrared technology, the target guidance systems for night fighters, the interception technology, the methods (algorithms) for cracking encryption and much more

Another fact is interesting: As early as 1941, the head of the Reich Postal Research Institute, Prof. Friedrich Gladenbeck, gave a lecture for high-ranking officers of the armaments office at the Wehrmacht High Command on “the importance of atomic fission for the construction of a bomb with a hitherto unknown explosive power” – that’s what it said Title of this lecture!

It must be admitted that many German scientists during the war - and even afterwards - were not particularly aware of the "double face" of the Reichspost. Incidentally, even today not all questions have been answered - we certainly don't know everything yet! This is a direct consequence of the (contrary to appearances) weakly centralized research policy of the Third Reich, which was not subject to any unified and simple scheme, and the complicated relationships between various institutions and research teams, which were more or less kept secret (the nature of these I only described the apparently chaotic organization in a detailed addendum in volume II).

The role of Professor Gladenbeck's institution grew as relations with the armed forces and industry became more concrete, something that Ohnesorge constantly strived for. One of the turning points on this path was a meeting that took place on August 17, 1943 in the *Wolfsschanze* (Mazury). Present were the already mentioned Reichspostleiter, Hitler, General Bodenschatz, who represented Reichsmarschall Goering, and several other people. It was decided that the Reichspostforschungsanstalt would carry out the following projects on behalf of the Luftwaffe:

- Development of a device that would allow night fighters to Fighting in closed cloud cover.
- Development of a pan-view television to visually identify strips of metallized cellophane used by the Allies to jam German radar (the clouds were emitting strong false echoes). It was about distinguishing actual from apparent goals.

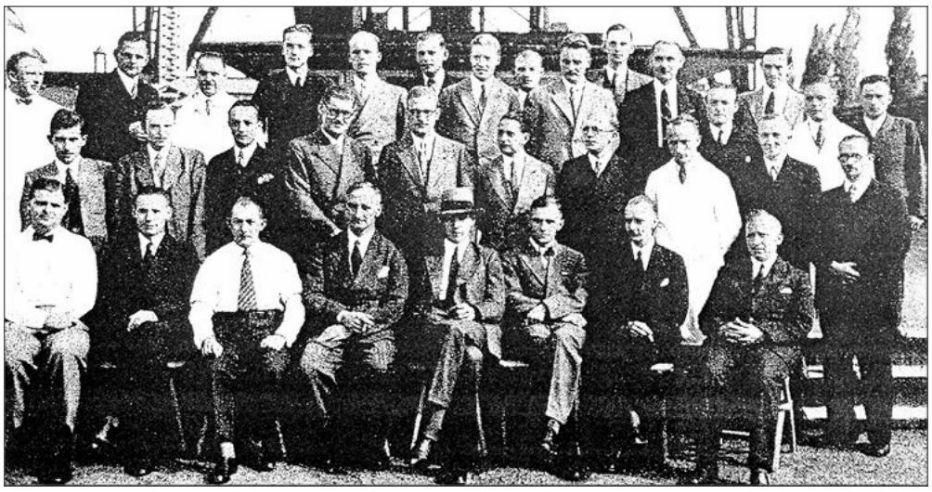
- Development of electric proximity detonators for those of the

Anti-aircraft artillery used missiles.

- Development of homing guided warheads for anti-aircraft missiles.

- Development of an “electric telescope” – this was probably an observation device that combined a normal optical lens with a television amplifier for residual light.

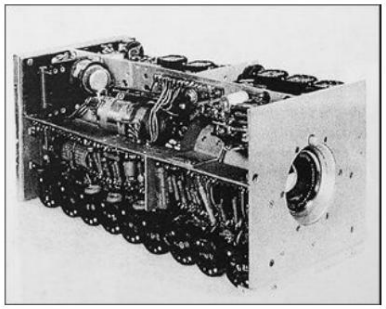
Night vision devices, which were realized separately, were excluded from the contract.



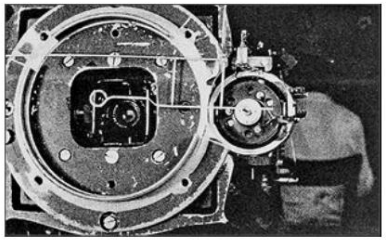
Employees of the Reichspostforschungsanstalt. The recording dates from 1934. (Archive)

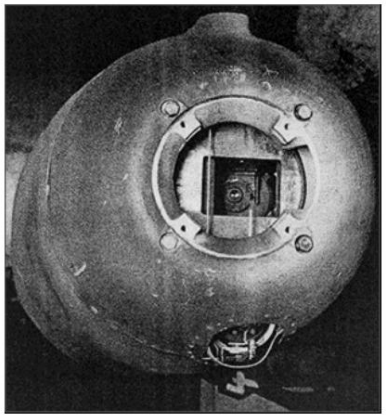
This short list alone shows that it was an interesting research facility. She was also greatly respected by the highest leadership of the Third Reich, e.g. Hitler. B. spoke several times in superlatives about Ohnesorge's efforts and awarded him the Knight's Cross of the War Merit Cross with Swords in November 1944 - the highest award a civilian could receive. This steadily increased the rank of the institution, which bore fruit in the form of increasingly lucrative relationships. The institution was B. to a significant extent in the work of the research institutions in Peenemünde (ie the military "Army Research Institute Peenemünde" and the private production company "Electromagnetic Works") involved. Incidentally, on the island of Usedom there was a kind of "liaison staff" made up of employees who had been assigned to the institution. Such companies as AEG, Telefunken acted as partners (they joined much later

together), Lorenz, Siemens, Blaupunkt and Bosch. In addition, there were two companies in which the Reichspost held many shares: Reichspost-Fernseh-GmbH and Elektro-Optik GmbH. Both dealt mainly with television technology and its combat use. All this not only enabled unhindered access to credit, but also brought numerous state subsidies. The production of many different electronic devices was started, not forgetting that at that time it was all very advanced technology, including television amplifiers and various components for television systems with a resolution of 441, but also 729 lines - which is more than today's TV signal is the case. There were also various electron tubes, oscillographs, amplifiers, VHF and LW radios (for the Navy) - not to mention purely experimental concepts.



The ton camera developed by the institution . (Archive)





The same camera installed in the nose of an Hs-293 shell (with and without ballistic protection). (Archive)

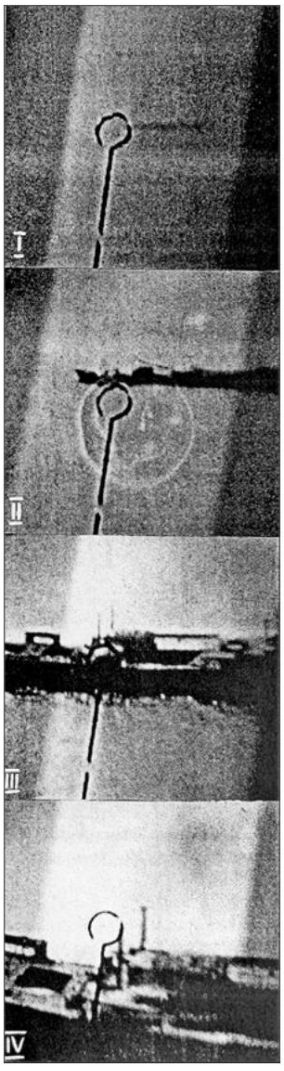
The Reichspost also manufactured a large number of different shortwave transmitters. Tanks that took part in the September offensive were already equipped with Reichspost VHF transmitters. At the same time, the demand was constantly increasing. Thus, the regional administration in the conquered eastern territories and even on the Greek islands was a constant customer of radio stations because of the insecure telephone traffic. The construction of radio substations alone was a daunting task, as 60 m high masts were erected for this purpose, which corresponds to over 20 stori At the same time, jammers were built to disrupt foreign radio stations broadcasting their programs to Germany.

However, the central and probably most interesting field of activity was television technology - including classic television, which had nothing to do with warheads for guided missiles. Ohnesorge managed to persuade the Army Weapons Office to fund the construction of television transmitters for the Wehrmacht's communications needs. As early as the early 1940s, transmitters were installed in Berlin, Munich, on the Brocken and the Großer Feldberg, and the transmitter on the Eiffel Tower in Paris was replaced with a system that conformed to German standards. Broadcasting vehicles for propaganda reports and vehicles with television screens were built to make life easier for soldiers in field hospitals. It is interesting that on August 15, 1940, the institute was visited by a Soviet delegation that was very interested in the propaganda potential of television and therefore wanted to work closely with them. Because of

Nothing came of the attack on the USSR, but the resolution by which the Soviet government decided to introduce the German television signal transmission standard remained.

Over the next few years, there were more and more concepts directly related to the design of armaments and electronic equipment for the military. A veritable boom in this area began.

Under the alias *Naxos ,* a device was developed for submarines that warned of exposure to a radar beam and indicated the direction from which the beam of rays was emitted. A warhead with homing guidance for anti-aircraft missiles was based on a similar principle. It was designed to align itself against the on-board radars of aircraft that were paving the way for Allied formations *(Leaders).* These works were given the alias *greyhound .*



A sequence of images captured on board a Junkers research aircraft through the *barrel* camera. The aircraft simulated the approach of the projectile to the target - the Hs-293 shells were intended to be used against ships. (Archive)

Another important area was that already described in the first volume Infrared technology and related work on the construction of

Television sights with cathode amplifiers, which bore a resemblance to the amplifiers in night vision goggles, but operated in the visible light range.

One could venture the assertion that the television engineering group was the most important department of the institution. In the second volume, when discussing TV seekers for missiles, I described the activities of the Fernseh GmbH - a company that worked closely with the Kleinmachnow institute, although it was formally part of the Robert Bosch concern. Therefore, the topic is only hinted at here.

A bit shocking is the fact that, in addition to cameras for guided weapons, work was also being done on a television system intended to support the command of ground forces units. It was primarily intended to transmit up-to-date maps of the tactical situation. The Germans managed to build and test a system with a resolution of 1,029 lines! Such “terminals” were also intended for the 22 In this way, assembly in night fighters would have devices, which had a relatively short range, can be supported by been provided on-board radar processed images of the tactical situation in a larger area, which came from large ground radars (e.g. *Würzburg-Riese) .* The ground radars should also be linked to the triangulation network of the thermal direction finder, as described in Volume I. Combined with a network of "anti-aircraft towers" where the anti-aircraft guns would have been automatically aimed at targets, this would certainly have led to the fundamental revolution in the defense of large cities and radically increased the losses of the Allied formations!

16 x 16 x 40 cm mini-camera modules with battery-powered transmitters were developed for the Peenemünde Air Force Testing Center, which worked on liquid-propelled anti-aircraft missiles, which were code-named *Fluko* and *Tonne .* The *barrel* was also used by Henschel in the Hs-293 air-to-surface missile. Apparently one was

Guidance system also under consideration for the waterfall anti-aircraft missile.

In this way, the Reichspost ensured that it could occupy a key position in the renowned field of building guided rockets. Large-scale research work in this area was carried out from the beginning of 1943. Already on November 5 of the previous year, a secret conference took place in Berlin on the subject of "Special problems of the two experts from the remote control", Reichspostforschungsanstalt stipulated that a "safer optical television, and for target identification with thermal radar" should be built.

[22] After

that, intensive tests began on the test site, which were connected with the perfection of specific solutions. At this stage, they were still causing headaches for the “posters” due to a number of problems that were emerging. The main difficulty was that the small transmitters mounted in the seekers did not guarantee sufficient signal strength, as a result of which the image quality at distances of around 10 km was unsatisfactory. The high velocity of the projectile combined with the small field of view of the camera and the excessive sensitivity of the Hs-293 projectile (because it was mainly this missile) to joystick movements led to breaking visual contact with the target on almost every attempt. The effective use of the new weapon required the technician on board the aircraft an extraordinary sensitivity, almost manual talent. At that time, the institute used the previously purchased Junkers W-34 transport aircraft, which functioned as a flying laboratory.

On board were the receiver and modern equipment for image analysis.
In addition to the ton camera, a newer seeker head with a TV module from the *zero series* was also examined. Eventually, however, the search heads with the ton cameras went into production. Because of this, the Fernseh GmbH received no less than 5 million marks. Over time, it also managed to minimize most of the previous technical problems, especially those that had a negative impact on the transmitted images. In 1943, the Henschel works in Berlin-Schoenefeld began assembling the cameras in the Hs-293 projectiles. As mentioned, they should

mainly used against ships in the Mediterranean. On this occasion, problems with the guidance system also came to light, which were compounded by such factors as crosswinds or the anti-aircraft defenses of the attacked units, which forced the plane to maneuver. Fortunately for the Germans, radio transmission of guidance commands did not fundamentally limit the aircraft's maneuverability (aside from acceleration loads that could affect the missile technician's fine movements).

The Reichspostforschungsanstalt took another initiative in this area. Namely, she dealt with the installation of similar seekers equipped with the ton cameras on the *Goliath remote-controlled midget tanks/ robots.* In its basic version, *Goliath* was controlled by a cable, which also provided the power needed to drive the electric motor. It was particularly useful in battles in urbanized areas. We know him mainly from the Warsaw Uprising, when the German troops destroyed the street barricades erected by the insurgents in this way. The Reichspost intended to turn the *Goliaths* into an effective anti-tank weapon on the battlefield, so that they could provide an alternative to the anti-tank guided missiles being built at the same time. It was determined that the range of the radio link in the field allowed the tracked robot to be used at a distance of up to about 7 km. The explosive charge should be initiated under the hull of the attacked tank. There is no information about the drive, but it can be assumed that an internal combustion engine would have been used in this variant.

However, that was by no means the end of his research ambitions. Ever since the beginning of the war he had been interested in entering the prospective field of nuclear physics, which Rainer Karlsch described very well in his book "Hitler's Bomb". The institute in Kleinmachnow was one of the leading research institutions in this area and was involved in the separation of isotopes, among other things.
In the middle of 1940 the Institute for Special Problems in Physics was established in Miersdorf. The construction of a cyclotron for research into phenomena that occur when atomic nuclei collide was started at the nearby Zeuthener See - in this case it was

American research patterns imitated. The cooperation with the nuclear research institute in Berlin-Lichterfelde, which was headed by the then little-known entrepreneur Manfred von Ardenne (he had neither completed a degree in chemistry nor physics), was steadily intensified.
So, as you can see, the Reichspost had quite a considerable research base that was geared towards the development of an atomic bomb or a nuclear warhead! One could almost say that she was one of the pioneers in this field during the Third Reich. Nevertheless, she only played a supporting role - she did not build her own reactor. A key role in this area fell to much lesser-known institutions, some of which are mentioned elsewhere in this book.

Many authorities in the Third Reich felt that nuclear weapons production was too long-term to hope for before the end of the war. For the Reichspost, it was of particular importance that the Army Weapons Office waived the management of the work and passed on the supervisory duties to the Reich Research Council. For the Wehrmacht, this direction was only "important for the war" and was not given high priority. The above-mentioned Reichspostinstitut in Miersdorf was always better financed - in 1944 it got e.g. B. an amount of 2.5 million marks - but this was decidedly too little to be able to hope for the construction of the atomic bomb before the end of the war. This is also evident from the number of employees – at the beginning of 1945 there were about 60 scientists. A plant for isotope enrichment, the so-called *Philips cascade ,* was built, which delivered 13 kg of a radium-beryllium preparation. It was the only neutron generator in the Berlin region, which was used by Otto Hahn, among others. It was not until the end of 1944 that the Lorenz AG company was about to complete the assembly of the cyclotron, although this was only an auxiliary device on the way to building a reactor. A second similar device with a weight of 60 t was built in Berlin-Lichterfelde in a similar time.

Of course, the work carried out in Kleinmachnow and Miersdorf only made sense as long as the Wehrmacht and Speer's ministry were interested in using it. The withdrawal from the funding of the most renowned research direction and other "dissonances" meant that Ohnesorge had ever greater hopes of working with the

SS put. Himmler naturally shared this interest, since he was fundamentally fascinated by all possible innovations in industry and research.

Initially, these were still measures that were not of major importance from the perspective of research and development. In the fall of 1941, Ohnesorge conducted a series of interviews with SS Gruppenfuehrer (later Obergruppenfuhrer) Gottlob Berger, the head of the SS Main Office. At the beginning of May 1942, they led to the formal incorporation of the entire postal security service, which numbered around 45,000 men, into the SS Berger also provided the Reichspost with around 5,000-7,000 people who formed the long-distance Kraftpost units. From this point on, paramilitary formations of the Reichspost outside the Reich borders wore greenish-grey Waffen SS uniforms with "SS Postschutz" braids on the sleeves. Black uniforms of the Allgemeine SS were used within the Reich. Some troops were later even used as auxiliary formations in the fight against the partisan army. Incidentally, Berger formed a Waffen-SS intelligence regiment called *Ohnesorge.* In return, the Reichspost launched a propaganda campaign in favor of recruiting volunteers for the Waffen SS. There was talk that later the entire research infrastructure of the Reichspost was to be incorporated into the economic and scientific empire founded by Himmler. In any case, Ohnesorge informed Himmler regularly about the status of the research work.

SS Brigadefuhrer Willi Köhn was appointed Plenipotentiary of the Reich Post Minister for the occupied Eastern Territories (from 1933 he was the foreign commissioner of the NSDAP for South America; in the years 1937-39 he held the office of special representative of the Reich Post in Spain and was head of a special staff under General Franco). In 1944, Ohnesorge's "drift" towards the SS intensified. Close collaboration in the field of high-frequency research was established, leading to Himmler's empire beginning to play a crucial role in this area by - as described in Volume II - Offered "support" in the form of concentration camps (Groß-Rosen). The Reichspost also supported the security service by tapping and decoding transatlantic telephone traffic. It is not

rule out that Himmler also benefited from the nuclear research of the Reichspost, which was neglected by the Wehrmacht.

Some additional words about "invisible" ships and planes

This chapter is merely a supplement to the information printed in Volume I and is based on a hitherto unknown Allied intelligence report, although it contains information partly published in the reports previously described. 23 It is therefore better to treat it as a brief synopsis of this almost unknown but undoubtedly fascinating subject.

The report is only about a dozen pages long, but due to the nature of the institution that wrote it, it represents a synthesis of information from many sources. It therefore does not refer to just one institution, but attempts to deal with the subject matter described as a whole describe. This is valuable insofar as the first American post-war work on a technique known there as "stealth" and based on a reduction in radar visibility undoubtedly represented not only a further development but actually a practical application of the German research results, and that after more than ten years! So let's look at the work of the experts from the "Joint Intelligence Objectives Agency" in 1945-47.

The author of the intelligence publication on which I based this chapter mentions that reducing radar visibility was no stranger to wartime American scientists. He gives the names of two institutions: the state's War Committee on Dielectrics (a Department of Defense committee responsible for dielectrics) and certain Radiation Laboratories. However, he admitted that this work was not very advanced, in any case, it did not bring such concrete results as the concepts of the Third Reich.

In the first volume I basically only have those from the IG Farben concern

The works realized near Frankfurt have been discussed in more detail, the others I have only hinted at. Now is the opportunity to remedy this deficiency. In fact, the “new” report also described four other concepts from this area: • the Osram company (previously only briefly mentioned);

• by Professor Stetter from the Nuclear Research Institute in Vienna; • the Technical University of Stuttgart; • the Kaiser Wilhelm Institute (which was an equivalent to the Academy of Sciences), specifically the Institute for Biophysics in Frankfurt am Main, which was subordinate to it; • The Technical University in Prague and in Brno, where this concept was presented because of its importance for the topics described in this book. Namely, it became the target of the race for secret technologies of the Third Reich between the American and Soviet secret services!

Another institution was briefly mentioned: the Ernst-Oerlich Institute and the concept implemented there by Prof. Schhenghagen - but nothing more. The participation of the companies Telefunken, AEG and Bosch as well as the Technical University of Darmstadt (Prof. Carl Wagner) and the physics department of the University of Erlangen were mentioned just as laconically. Nevertheless, it is clear that the amount of work in the field of "stealth" technology was impressive and has not been adequately appreciated to this day. He was certainly larger than z. B. the efforts to build a nuclear reactor, which are now so exposed; honestly, their outcome could have had a much bigger impact on the course of the war! So let's look at the concepts mentioned above by starting with the Osram group.

The US intelligence research team focused on interrogating the key people, starting with engineer Erwin Weise from the aforementioned company. He was assistant to Dr.

Friedrich from the "Studiengesellschaft für elektronic lighting", which functioned as the company's own research and development department. Officially, both dealt with the technology and application of semiconductors. Weise was regarded by the government of the Third Reich as a key personality from the point of view of war science

and evacuated to Erlangen in the last weeks of the war, where he soon aroused the interest of the American intelligence service - especially since he had a reputation as a fanatical National Socialist and was a party member.

Here, even before the capitulation, an attempt was made to restore Weise's laboratory. Although no actual attempts had been resumed on it, it is telling that it was soon looted by several Allied technical intelligence mobile groups, so thoroughly that the JIOA team collecting material for the report described here found nothing there found more.

However, Weise stubbornly claimed that he had no role in the "Stealth" project and referred the Americans to his superior, Dr. Frederick. However, this referred to Weise, so the search for him was resumed. He was interrogated in Höchst for the second time, but again did not provide any important information.

Doctor Friedrich, on whom all the attention was now focused, was head of the aforementioned "Studiengesellschaft". He could not be found in his Berlin apartment; It was only on September 13, 1945 that an interrogation took place in the headquarters of the Osram Group. He was 65 at the time and, according to several associates, was also an active party member, although he was trying to give the exact opposite impression. Apart from that, however, he had the reputation of an experienced researcher and a very intelligent and good, if no less petty and selfish, administrator. He began talking about the *chimney sweep project* (see Volume I) seemingly without any reservations , although he constantly hid behind his bad memory – especially when it came to concrete technical details.

As part of the project mentioned, materials with the code names *Wesch* and *Jaumann* were developed and manufactured. However, he casually mentioned that his task was to develop a single-layer antiradar coating with a "high mu coefficient". The American officers noticed that their interlocutor was clearly averse to the conversation. They therefore began to question Friedrich about details and to put increasing pressure on him. It is unknown what exactly the concept was based on, but they certainly had many arguments in their hands - after all, they were representatives of the new state leadership. Friedrich finally came to the conclusion that

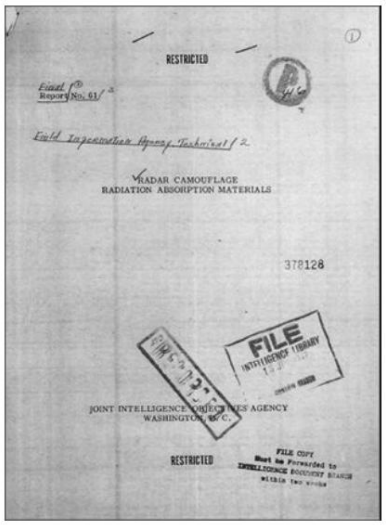
that the only meaningful answer would be a report, which he intended to draw up based on the notes found and details from the surviving documentation. He mentioned on this occasion that an officer of the US Navy's intelligence service had already requested such a report from him and that it should be ready in a week, although he had not yet been able to sort the material accordingly. The Americans felt they had stumbled upon a valuable and promising lead, although as soon as they left the room they heard from a member of the company's management that Friedrich had made contact with a Soviet research organization near Berlin. This means, of course, that he also contacted the Russian intelligence service! For while, as was soon to be discovered, the Americans had decided to focus primarily on guided missiles for their technology drainage - completely ignoring many other lines of research of which they were often unaware - for the Russians it was a question of Honor to adopt the German "Stealth" technology as one of the main war trophies. That was one of the main goals of their technical intelligence service, which admittedly turned out to be the right decision. It was one of the forgotten and secret battlefields of the intelligence services in the early post-war years, which will be described later in the book.

However, we are dealing with a certain paradox here: it was the Americans who later included the first aircraft (the SR-71), which was difficult for radars to detect, in their arsenal, despite the incompleteness of the data obtained, while the Soviet Union made virtually no use at all of the vast knowledge it came into possession of - but that is a story for another publication altogether.

The promised report was eventually prepared by Friedrich and contributed to the technical summary of knowledge of German "anti-radar materials" described in the following pages.

Another institution the JIOA group dealt with was the Brno Technical University in Soviet-occupied Czechoslovakia. Here, however, for fairly obvious reasons, she met a wall of silence and only succeeded in possession

to come from scraps of information that were printed in the further part of the book along with other information about this region. It turned out that this area was a kind of research enclave of the Third Reich and something of a "domestic principality of the SS"! An enclave basically forgotten by later explorers!
Be that as it may, it should not go unmentioned that the Brno facility (along with the one in Prague) is ranked among the most important ones involved in the work on “invisible” planes and ships!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Enemy Report No. 61

Field Information Agency, Technical

RADAR CAMOUFLAGE
RADIATION ABSORPTION MATERIALS

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The front page of one of the key Allied intelligence reports on German "stealth" technology - the reduction in radar visibility. (NARA/JIOA)

Another target of the American officers was the Physics Institute of the University of Vienna and the institute for neutron research that cooperated with it. During the war it was evacuated from Vienna to the mountain village of Thumersbach near Zell am See (not far from Salzburg). On October 12, it was possible to go to Dr. Georg Stetter, one of the most important scientists, who was also staying in a nearby café.

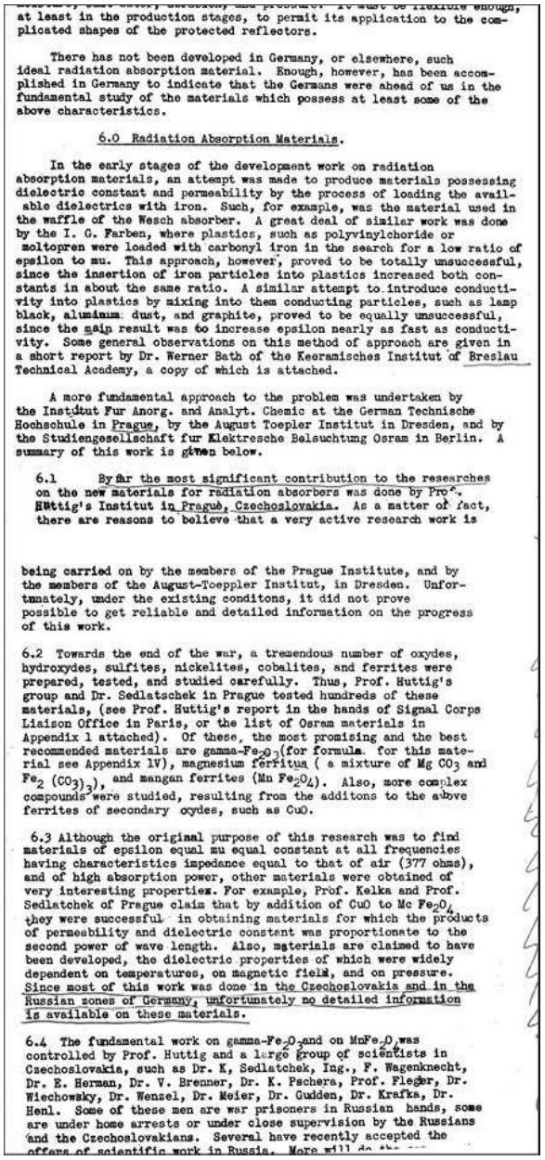
However, during the interrogations it was determined that the Viennese institutions were only conducting auxiliary investigations and were not developing any concrete anti-radar layers. Their main task in the final stages of the war was to determine the reasons for the decrease in the absorption of electromagnetic waves in existing materials when the wavelength was increased beyond 50 cm. However, if this is that

was the main problem of the Germans, then this indicates considerable progress in the work. Waves of this length are only of marginal importance in radar technology.

In mid-October 1945, the group therefore shifted its interest to another "target", namely the Research Institute for Inorganic and Inorganic-Chemical Technology at the Technical University of Stuttgart.

At the end of the war, the laboratories were evacuated to the former cable factory in Neckarhausen near Stuttgart. Here it was also possible to get hold of a scientist who had managed the project during the war - Professor Robert Fricke. However, even in this case it turned out that the facility had only conducted auxiliary investigations.

His main interest was - contrary to the name of the institute (!) - the plastics, on the basis of which absorption layers for electromagnetic radiation were developed. Combinations of such substances with ferrites were also investigated, which in this case made up the active ingredient.



at least in the production stages, to permit its application to the complicated shapes of the protected reflectors.

There has not been developed in Germany, or elsewhere, such ideal radiation absorption material. Enough, however, has been accomplished in Germany to indicate that the Germans were ahead of us in the fundamental study of the materials which possess at least some of the above characteristics.

6.0 Radiation Absorption Materials.

In the early stages of the development work on radiation absorption materials, an attempt was made to produce materials possessing dielectric constant and permeability by the process of loading the available dielectrics with iron. Such, for example, was the material used in the waffle of the Wesch absorber. A great deal of similar work was done by the I. G. Farben, where plastics, such as polyvinylchoride or moltopren were loaded with carbonyl iron in the search for a low ratio of epsilon to mu. This approach, however, proved to be totally unsuccessful, since the insertion of iron particles into plastics increased both constants in about the same ratio. A similar attempt to introduce conductivity into plastics by mixing into them conducting particles, such as lamp black, aluminum dust, and graphite, proved to be equally unsuccessful, since the gain result was to increase epsilon nearly as fast as conductivity. Some general observations on this method of approach are given in a short report by Dr. Werner Bath of the Keeramisches Institut of Breslau Technical Academy, a copy of which is attached.

A more fundamental approach to the problem was undertaken by the Institut Fur Anorg. and Analyt. Chemie at the German Technische Hochschule in Prague, by the August Toepler Institut in Dresden, and by the Studiengesellschaft fur Elektresche Belsuchtung Osram in Berlin. A summary of this work is given below.

6.1 By far the most significant contribution to the researches on the new materials for radiation absorbers was done by Prof. Huttig's Institut in Prague, Czechoslovakia. As a matter of fact, there are reasons to believe that a very active research work is

being carried on by the members of the Prague Institute, and by the members of the August-Toeppler Institut, in Dresden. Unfortunately, under the existing conditons, it did not prove possible to get reliable and detailed information on the progress of this work.

6.2 Towards the end of the war, a tremendous number of oxydes, hydroxydes, sulfites, nickelites, cobalites, and ferrites were prepared, tested, and studied carefully. Thus, Prof. Huttig's group and Dr. Sedlatschek in Prague tested hundreds of these materials, (see Prof. Huttig's report in the hands of Signal Corps Liaison Office in Paris, or the list of Osram materials in Appendix 1 attached). Of these, the most promising and the best recommended materials are gamma-Fe_2O_3(for formula for this material see Appendix IV), magnesium ferritua (a mixture of $MgCO_3$ and $Fe_2(CO_3)_3$), and mangan ferrites ($MnFe_2O_4$). Also, more complex compounds were studied, resulting from the additons to the above ferrites of secondary oxydes, such as CuO.

6.3 Although the original purpose of this research was to find materials of epsilon equal mu equal constant at all frequencies having characteristics impedance equal to that of air (377 ohms), and of high absorption power, other materials were obtained of very interesting properties. For example, Prof. Kelka and Prof. Sedlatchek of Prague claim that by addition of CuO to $MgFe_2O_4$ they were successful in obtaining materials for which the products of permeability and dielectric constant was proportionate to the second power of wave length. Also, materials are claimed to have been developed, the dielectric properties of which were widely dependent on temperatures, on magnetic field, and on pressure. Since most of this work was done in the Czechoslovakia and in the Russian zones of Germany, unfortunately no detailed information is available on these materials.

6.4 The fundamental work on gamma-Fe_2O_3 and on $MnFe_2O_4$ was controlled by Prof. Huttig and a large group of scientists in Czechoslovakia, such as Dr. K, Sedlatchek, Ing., F. Wagenknecht, Dr. E. Herman, Dr. V. Brenner, Dr. K. Pschera, Prof. Flegler, Dr. Wiechowsky, Dr. Wenzel, Dr. Meier, Dr. Gudden, Dr. Krafks, Dr. Henl. Some of these men are war prisoners in Russian hands, some are under home arrests or under close supervision by the Russians and the Czechoslovakians. Several have recently accepted the offers of scientific work in Russia. More will do the ---

An excerpt from the same report confirming that the main facilities working to achieve “radar invisibility” were located in the Czech Republic and Lower Silesia. The results of their work were to become one of several main goals of the Soviet "SMERSH" intelligence service. (NARA/JIOA)

The last target of the intelligence service was the laboratory for biophysical investigations of the Kaiser Wilhelm Institute in Frankfurt, at Forsthausstraße 70. In this case, too, the name was completely misleading, because anti-radar layers had nothing to do with biophysics at all! No new substances were created here either, only samples sent in from other laboratories were tested. However, a whole series of internal elaborations with a total volume of 180

print pages found. Here are a few titles as examples: •

“Determination of the impedance and the electricity constants of substances for waves from the decimeter range",

• "Measuring technology for impedances using decimeter wave resonance", • "Construction of devices for resonance investigations of impedances in the decimeter wave range",

• "Influence of fortifications in the Lecher system on the stress distribution along said [system]".

Well, these are just "grazing lights", fragments of a large-scale research project, in the course of which it was possible to develop several generations of substances. Perhaps these efforts would have leveled the Allied superiority in radar technology during 1945. Although the Germans mainly used these layers for submarines (code name: *Black U-Boot),* e.g. For example, the Horten brothers' *flying wing* was also examined in a "stealth" configuration, and there was a project with the meaningful name *Black Aircraft.*

The further part of the report contains the description of the anti-radar materials developed in the Third Reich. Here are excerpts from the original text: “The

> oldest, but also the simplest and least effective type of German absorbent for electromagnetic waves in terms of its functional principle was a substance with the code name 'Netzhemd' or 'Bachemnet'. The whole thing was based on an attempt to build a dispersal net to be placed around the elements of the submarine as a diffusion shield. It was designed to protect the submarine by precisely matching its resistance to the 'received' wave to air resistance. The mesh was located a quarter-wavelength from the metal surface, thereby creating an infinitely large resistance at the location of the protected surface. 'Bachemnet', built from a large number of resistors, turned out to be impractical to use due to its bulkiness, its impact on the maneuverability of the submarine, as well as mechanical damage to the network elements exposed to sea water

out.

The next, similarly unsuccessful attempt was based on the construction of an absorber consisting of several layers. The layers were alternately semiconductive and nonconductive (air). Known as 'Becke Hellwege', this material was eventually abandoned due to the difficulty of assembling the various layers of material together.

However, the above principle was used - albeit in a modified form - to construct the best German absorber known under the name 'Jaumann'. It was an approximately 7 cm thick laminated structure composed of seven semiconducting layers spaced approximately 9 mm apart and separated by layers of dielectric material. The layers consisted of cellular igelite with a low dielectric constant (1.3). The entire absorber was covered with a 5 mm thick layer of igelite to protect the semiconductor material. The surface resistance changed exponentially from about 30,000 ohms to about 300 ohms. The effectiveness of this material was said to be so high that it reduced the reflection coefficient to below 10 percent in the wavelength range from 3 to 30 cm. [That would be an achievement that would be more appropriate for the 1960s, an effective reflecting area of the radar beam reduced by dozens of times!] […]

The most commonly used material was 'Wesch', said to have been developed by Dr. Wesch was developed by the Institute for World Post and World Communications in Heidelberg. It consisted mainly of a 'mat' of a rubber-like substance called 'perbuman', heavily impregnated with iron carbonyl. It was shaped like a waffle and had rims about 4mm high with squares about 20mm long. The base of the 'waffle' was about 3mm thick and was separated from the submarine's hull by a layer about 1mm thick of a substance called 'Opanel-0'.
The whole thing was glued to the submarine with a substance called 'chloroprene'. In earlier models, the 'Perbuman' waffle surface was protected by a layer of lacquer. Later became the

> Whole waffle filled with polymerized synthetic rubber (Buna) in the form of foam to achieve an even outer surface. The efficiency of this absorber depended on the frequency. Good attenuation was achieved in the S and X bands, where, according to German data, no more than 10 percent of the radar beams were reflected. […]
>
> The complex structures tested and used in practice by the Germans to reduce the radar visibility of their submarines were inconvenient, heavy, and relatively expensive to produce and assemble. They also possessed narrowly defined frequency limitations. Their use arose out of military necessity. However, research was initiated, and relatively early on, to develop real anti-radar materials that could absorb and dissipate the energy sufficiently to eliminate reflections." Here begins the description of a "perfect material" associated with the following conclusion ends:
>
> "Neither in Germany nor anywhere else could a material be developed that would have perfectly met the requirements. However, the Germans achieved enough to realize that they were ahead of us in basic research into materials that possessed at least some of the properties mentioned."

These words are only the proverbial tip of the iceberg, because the following part of the cited report was frankly stated:

> "Since most of this work was carried out in Czechoslovakia and the Soviet zones of Germany, precise information on these materials is not available".

Many of the most interesting tracks lead there; this book is mainly dedicated to them.

Mysterious concepts from the field

of high-frequency research

While browsing through the files remaining from the archive of the personal staff of the Reichsfuhrer SS, I came across a German report that describes relatively comprehensive research work in the area of so-called "high frequency physics" that was carried out in the Third Reich. Since myths and legends have sprung up around this little-known area, I'd like to provide a condensed version of that description.

Its author is unknown - his name is illegible, but the header bears an inscription characterizing the [illegible] between their research efforts in this area and those in America, the ratio is said to have been 1 to 10.

What are the absolute numbers? The report provides an answer to this as well, stating that, on Hitler's orders, 1,500 people were released from frontline service for such research programs. Is that a lot or a little? It is likely that the figures are comparable to those of the subject of the last chapter. However, from the further text, which contains an overview of the research work, it emerges that it is mainly based on the further development of radar technology, radio-electronic countermeasures (in today's terminology, i.e. quasi "anti-radar technology"), the electronic equipment of aircraft (especially night fighters).) and the various types of remote control systems for guided weapons. Indeed, for such a "prestige area" and given the importance of dominating German airspace, the damage done by Allied air forces, etc., 1,500 people is not much, although in fact there were a few thousand in total and their number was growing. Incidentally, the goals of the research work, which was closely related to aviation, explain why Goering formally performed the function of Reich Plenipotentiary.

As already mentioned, the letter is dated early January 1944 and it is a pressure to expand the institutions active in this field

to recognize. In fact, the "growth momentum" seemed impressive.
It is Z. B. to read:

> “The handed over institutes have to be expanded to accommodate new staff, new institutes have to be built, the existing buildings and [other] properties have to be prepared.
>
> The construction work carried out so far amounts to a total of 5 million marks. In addition, to a large extent
> Laboratory equipment, workshop machines, measuring devices, radio devices, material, contingents of raw materials, vehicles, aircraft, operating materials, etc. used. Due to the air raids, especially on Hamburg, Cologne and Munich, and the increasing danger to Berlin, many research institutes have to be evacuated. In order to be able to carry out this work, of which only the most important ones are mentioned, on July 16, 1943 the Reich Office for High Frequency Research e. V. brought into being. […]
>
> Twelve working groups were formed for the scientific management of the research work, corresponding to the most important research areas. […]
>
> After the expansion stage, which took about nine months, I can report today that the most important part of the German work in the field of high-frequency research is now under one management and can be fully utilized in the intended sense. However, the research work is long-term oriented and one should of course not expect large successes, which would be important from a warfare point of view, within a period of three quarters.
>
> Due to the war situation, which requires quick solutions, three selected research directions have been particularly intensified - in such a way that preliminary results can already be presented:
>
> 1.
>
> Protection of our radio-electronic equipment from enemy interference - in the form of dropped metal foils

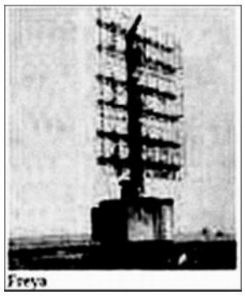
(dipoles).

2. The provision of our centimeter wave technology and the development of an on-board radar device for round detection (similar to the English device 'Rotterdam'). In addition: Development of the physical bases for measures to protect our cities from the localization [of targets] by the 'Rotterdam' devices (see Annex 1 - overview on the topic: 'Possible air attacks on the Reich capital by means of the 'Rotterdam' devices including defense options').

3. The protection of submarines from detection by radar equipment ('Black Submarine').”

The last point quoted, of course, concerns the subject described in the previous chapter. In the further part of the report prepared for Himmler (!), the individual projects were described in more detail.

Regarding point 1, dealing with the discrimination of echoes reflected from strips of metallized foil or actual targets, two approaches have been defined. The first was somewhat vaguely called *propeller* modulation, referring to the aircraft's onboard radars. According to the description, the device, code -named *Nürnberg ,* had already been tested and the Germans began to add it to the arsenal of weapons. The second concept, *dubbed Würzlaus ,* was designed to take advantage of return attenuation from stationary objects (dipole clouds roughly represent such objects) based on the Doppler effect, which results in a frequency shift of the echo depending on the speed of the target. Such a device should first be built. According to the description, both concepts should be used simultaneously.



The Freya radar device and its development version. (NARA)

With regard to the development of centimeter-level radars mentioned in point 2, the following was stated: When the Germans first encountered the *Rotterdam system ,* they realized with some dismay that this new direction finder range had no equivalent in their own research . Its advantage was primarily due to higher detection accuracy - that's why the fate of submarines and the course of the whole "Battle of the Atlantic" changed to such an extent, since the new equipment was able to detect even periscopes.

In addition, the German jamming devices were not adapted for this area of work. The Germans therefore began work “with the utmost urgency” on a comparable system, which was given the code name *Berlin* and – as the report reads – was in a certain way superior to the Allied model. It turned out to be fail-safe. The company Telefunken should start production.

On this basis, a "radar periscope" for submarines should also be created, which would have made it possible to find foreign surface vehicles under water.

Another concept, codenamed *Reichenhall ,* concerned radars for night fighters - their range "was greater than the flight altitude", so it can be assumed that it was more than 10 km. They would have allowed fighter planes to conduct independent dogfights even at zero visibility.

The *Würzburg* radar seen in the photo was much smaller than the later version called *Riese.* (archive of the author)

The *Würzburg giant.* (archive of the author)

Another piece of research in this new field was a device that would have made it easier for aircraft used in support of ground forces to locate tanks on the battlefield.
The description speaks of an "increase in accuracy". A whole series of applications was planned for anti-aircraft artillery to increase its effectiveness. However, they were not named.

In one point of the enumeration, the possibility is again quite cautiously indicated *of "generating and amplifying very short light pulses of high power in the invisible part of the spectrum (ultraviolet, infrared) in order to transmit commands and remote control signals without interference and to identify targets, distance measurements to be able to make things like that."* In summary, it can be said that German radar technology

was by no means a marginal or poorly developed area – despite the belated use of the centimeter range. At the end of the war, the Third Reich alone had at least 5,000 ground radar systems, of which around 2,500 were of the *Würzburg-Riese type,* which had antennas with a diameter of 7.5 m and were characterized by relatively high accuracy and a range of 80 km. They enabled radar coverage of the main areas of the country and the creation of radar guidance zones for fighter planes. Part of the German report is dedicated to precisely this topic. As early as 1942, Generals Kammhuber and Galland began creating a radar-linked system to control air defenses - starting with the first and main line of defense, which consisted of Holland, the Ruhr area and the North Sea coast. This zone has been divided into 60 km wide sectors. Each housed a *Freya* - type radar for long-distance reconnaissance and early warning, and two *Würzburg-type radars,* the first for "target guidance" and the second for directing the interceptor (initially only during the day). 25 The report states that 43 enemy aircraft were shot down within the first six months of trial operation of this system, and no fewer than 457 more [illegible] September 1943, the 500th kill was recorded, on *"about a third of it in poor visibility, far over the sea and against very high-flying, fast reconnaissance machines (Mosquito and Spitfire), where the new*

control system proved to be particularly effective". So the innovative system worked perfectly – until the Allies began to use dipole clouds en masse. After that, the effectiveness of the *Würzburg radars* decreased significantly, but as early as 1943 their modernization began, which was based on the installation of the *Nuremberg devices .* It comprised 1,500 systems, with the first tests in the units starting just four months after the research work was completed. That solved the problem. Incidentally, the territorial range of the integrated air defense was systematically expanded, and night fighters were also included. Efforts were initially concentrated on north-west Germany and Holland, and it was not until late summer 1943 that work began to cover the rest of the Reich with an integrated anti-aircraft radar system.

The mighty *Würzburg giant* destroyed by an air raid. (NARA)

The antenna system of the *Neptun* on-board radar and the technician's stand on board a night fighter. (archive of the author)

The Bf-110 with the FuG-202 *Lichtenstein radar mounted.* (NARA)

Of course, the above description by no means exhausts the topic, other ground radars and on-board radar devices of night fighters remain unmentioned. Since I did not give this topic much space in the first volume either, I would now like to briefly present the most important systems. While the *Würzburg-Riese* was certainly the best and most widely used ground-penetrating radar, the onboard radars of night fighters are much less well known (the *Würzburg-Riese* was briefly described in Volume I as part of the presentation of city defense systems). Of the onboard systems, the following are of particular note: the FuG-202 *Lichtenstein,* the FuG-212 *Lichtenstein C-1,* the FuG-220 *Lichtenstein C-2* and the FuG-218 *Neptun* (FuG is an abbreviation of "radio meter").

The first three were developed and mainly manufactured by the Telefunken company, while the last was created at the Oberpfaffenhofen State Aeronautical Research Institute, known by the abbreviation "FFO". Later it was further developed and produced by Siemens.

The FuG-220 radar was also mounted on the Messerschmitt Bf-110. (Archive)

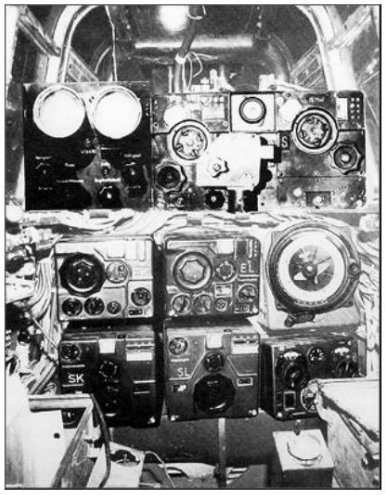
The Bf-110 with mixed radar antenna system: the FuG-220 (larger) and the FuG 212 - in the middle. (Archive)

Work on the *Lichtenstein* began before the war in 1939. Telefunken delivered the first variant ("BC") in August 1941 so that it could be tested by the Luftwaffe. The facility was still so large that no typical fighter plane could have transported it. For this purpose, Dornier Do-215B-5 light bombers were adapted, and only later the Ju-88c. At this time the designation FuG 202 was introduced. The antenna, placed outside the aircraft (on the nose cone), was in the form of a cross in the shape of the letter "X", at the ends of which there were four smaller crosses. A total of 16 small dipoles were attached to the ends. The radar didn't scan the space like on today's fighter planes; due to the phase shift between the individual dipoles, four beams of rays were emitted alternately: obliquely to the bottom right, obliquely to the top right, etc. The technician on board only knew approximately from which direction the reflected signal came and tried to steer the nose of the aircraft to where the echo received from four directions was about the same.

The system worked with a fixed frequency of 490 MHz, ie in the decimeter range (exactly 61 cm). Despite its large dimensions, the facility's range was short - about 4 km, which meant that the fighter planes had to be guided to their targets fairly precisely from the ground. The "field of view" range of the antenna was about 70 degrees.

The technician had three CRT displays at his disposal, which respectively showed the range to the target, the approximate azimuth and the altitude relative to the carrier. The electronics themselves were relatively simple. It was, of course, based on vacuum tubes, and the antenna's phase switch was mechanically driven by an electric motor. The Germans began equipping the night fighters with these systems in the spring of 1942.

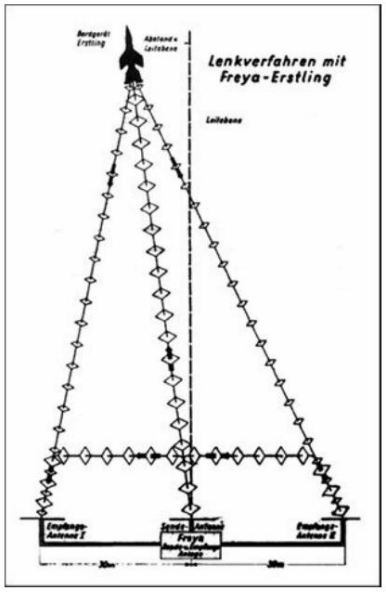
The first modernization (FuG-212) was mainly based on the simplification of the construction, including the reduction of the antenna system to just one cross piece, which had two vertical dipoles at each end. The weight was reduced so much that the FuG-212 could already be installed on serial fighters, but the maximum range decreased by no less than half to two km. Therefore, in the autumn of 1943, a rather strange solution was introduced - a connection between the FuG-212 and the larger FuG-220 (also from Telefunken). There were now two antennas on the nose of the aircraft - the "miniature antenna" of the FuG-212 in front of the cockpit windscreen and the larger antenna of the FuG-220. The latter worked in the meter wave range (3.5 - 5 m) and was characterized on the one hand by a long range of about 8 km in the case of a bomber, but due to the wavelength it was less precise. The minimum range was not less than 0.5 km, so the FuG-212 was used in the last stage of precise guidance, since its main advantage was its minimum range of only about 100 m. Overall, this again resulted in a system with a considerable weight, but it still enabled the fighter planes to conduct relatively autonomous dogfights. The pilots exchanged data on targets by radio, and the scattered formation had no major problems locating bomber groups. Incidentally, the FuG-220 was soon improved to such an extent that this model was also characterized by a minimum range of around 100 m, which is why the installation of the FuG-212 could be dispensed with.



Fitting two radar consoles (FuG-212 and FuG-220) into the narrow fighter fuselage was no small challenge. (archive of the author)

In addition, passive systems of the type FuG-227 *Flensburg* were used to locate the emissions from the Allied aircraft's on-board radars. For this purpose, two small antennas were mounted, usually on the wingtips.

In the summer of 1944, completely new radar devices of the type FuG-218 *Neptun* were added to the arsenal. They also had crosspiece-mounted dipole antennas, but unlike the *Lichtenstein* models, the crosspieces were attached to rods that protruded from the nose of the aircraft, so that they protruded significantly from the fuselage. They were a bit smaller though. The range was similar to the FuG 220: 100 m to 5 - 6 km. The main advantage over its predecessor was the ability to choose one of six frequencies, which significantly increased noise immunity. However, the Germans managed to build only small numbers of these installations, which were only fitted to the Bf-110 fighters in the G-4 version. 25 The reason for the strong pressure to equip fighter planes with on-board radars was obvious: it was necessary to counter mass night air raids – especially by the British air forces (the Americans bombed mainly during the day).



Under the direction of the Reich Plenipotentiary for High Frequency Research, an interesting precision guidance system for long-range missiles (the A4b with an expected range of about 600 km) was developed in late 1944, which determined the trajectory using a modified Freya system and generated correction commands that were automatically transmitted to the missile's navigation system became. The system consisted of a transmitting antenna on the launch pad (in the middle of the drawing) and two receiving antennas that were far apart. Perhaps over -the *-horizon radars like the Elephant* Seal could have generated corrections for strategic missiles in the same way. (via Joseph P. Farrell)

The report discussed in this chapter is dated January 1944. On its basis, one should in no way rule out the realization of other works of which we know nothing and which e.g. B. Guidance systems for missiles affected - especially at the end of the war. After all, the relocation of the Institute for High Frequency Technology to the Dachau concentration camp in August 1943 and the establishment of its branch in Gross-Rosen in early 1944 served not only to satisfy Himmler's ambitions but also (if not primarily) to keep the research work top secret !

"Swirl Weapons"?

In the first volume of "The Truth About the Wonder Weapon" I described a rather unusual invention, which I called "Generator for

Directed air shock waves" (German name: *Windkanone).* The installation consisted mainly of a long pipe at least half a meter in diameter. Some time ago a certain British physicist dealing with similar problems (the English edition of the first volume of the Wunderwaffe had already appeared) drew my attention to the fact that this interpretation was wrong. It is said to have been something different, more sophisticated and far more interesting. Incidentally, shooting down planes with just an “ordinary” blast of air would be a pretty desperate measure. All the more questionable would be "penetrating a steel plate from a distance of 200 m" - we are talking about "penetrating", and not about pushing back at a certain distance.

So it must have been concentrated energy, and in the case of an air jet, the concentration had to be done in a very efficient way.

What did this physicist have to say on the subject?
It turned out that a whole new phenomenon was involved - and it is quite strange that the Germans mastered this technology during the war. It is well known that a jet of air that has high energy disperses very quickly and there is no classical method to prevent this - at least not at distances of several hundred meters. However, there is a relatively simple, albeit completely “unclassic” method. It's about a certain kind of vortex. Later in this book I come back to an intriguing question, the key to which lies in a single word: "solitons".

There are different types of vortices. Two of them are particularly interesting for our considerations. The first type is, of course, all that we know from daily observation. In the second, we are dealing with vortices that are energetically isolated from their surroundings. They come e.g. B. in superfluid liquids (including liquid hydrogen). Such a vortex keeps rotating - there is no friction against the walls of the vessel.

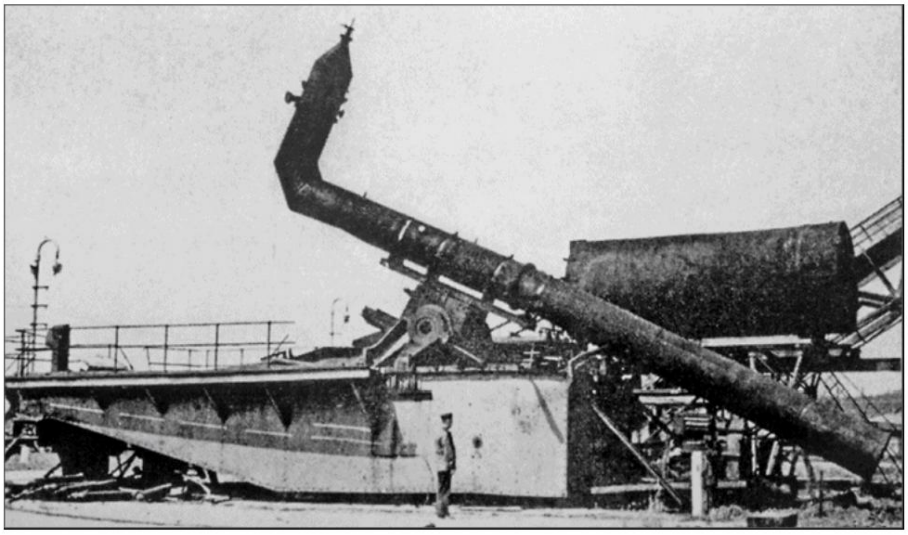
A good example from nature is the "Great Red Spot" on the surface of Jupiter. It's a vortex much larger than Earth, probably spinning for thousands of years

and in all likelihood still has a long "life" ahead of him.
How is it different from other atmospheric eddies, which almost never last more than a day? It has no mechanical resistance, but this is relative as it could also be resolved if the external conditions change, e.g. B. by being torn into many smaller vortices.

There are also magnetically isolated solitons. There are examples from plasma physics.

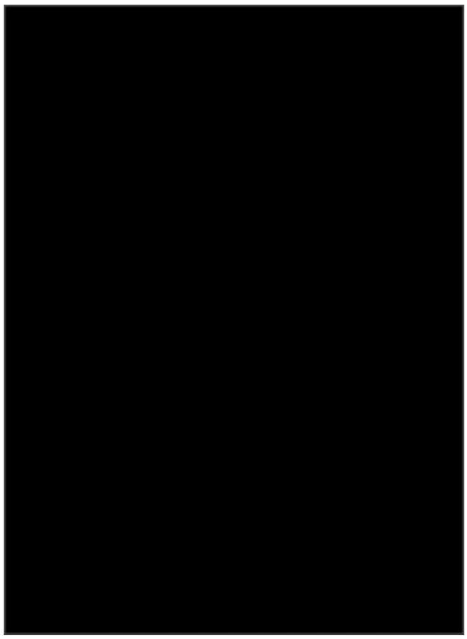
A high-voltage discharge (in special systems or after a lightning strike) often creates miniature vortices - balls of glowing gas with a temperature of hundreds of thousands or even a million degrees. They can only be seen when an ultra-fast camera is used. Their "lifetime" is millionths of a second. In the ionized gas ball with such a temperature there is an enormous pressure, which ends its existence correspondingly quickly, especially because it also loses power through the emission of electromagnetic energy. One might think that this is inevitable – but it is by no means the case!

With a certain, seemingly small change in external parameters, a vortex with a similar temperature is created, which exists for tens of seconds, not being disturbed even by contact with the case. So it has existed about tens of millions of times longer than its classic "colleague". The key to the solution is again the same: the almost complete lack of energy exchange with the environment. An example of this is ball lightning.



The prototype of a German vortex gun. (NARA)

It's almost a philosophical mystery, a possibly fundamental property of matter that we've only superficially understood. It turns out that similar vortices can also form in air at normal pressure and temperature - even relatively easily. Let's look at the smoke ring of a cigarette. It is much more stable than other vertebrae. This effect can be significantly increased with little effort. It can occur at significantly higher energies and speeds.



The concept of generating plasma vortices as carriers of very large energies is not new and can be traced back to the research work described in Volume II in the 1920's. The current fascinating American concept can therefore be seen as a kind of continuation of this research. The page printed above is from a 1963 article in the journal *Wojskowy Przeglÿd Lotniczy* (“Review of Military Aeronautics”) and includes a description of analyzes performed by the eminent Soviet physicist Pyotr Kapitsa. This is important because these analyzes were the result of a collaboration between Prof. Walther Gerlach and Kapiza on the nature and application of "ball lightning vortices", as mentioned in the second volume. This is the only way to obtain relativistic velocities of matter under laboratory conditions (the measured value of 180 km/s was given in the article even then), which is the key to other interesting phenomena.

See also the chapter "Weapons of the 21st Century?". (via B. Rduÿtowski)

This is a relatively new area of physics that is seldom written about, partly because it represents a very attractive alternative to classical separation plants for separating isotopes - the issue here is nuclear proliferation control. A leading American scientist in this field, who rather recklessly published a few too many research papers, had to pay the price with his life. In such vortices, speeds can be so high that cigarette smoke can be separated from the air. Therefore I refrain from describing experiments that are carried out in laboratories.

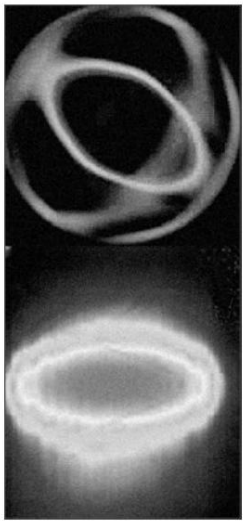
I would like to cite a much simpler example: a theory that is intended to open the way to further applications has only been worked on for a few years; however, the observations of such vortices in themselves are, of course, nothing new (roughly speaking, the reason for such stability lies in the fact that in such a “pretzel” – i.e. a torus – a centripetal force acts, which, however, has no exotic character at all, but derives from it shows that the resistance decreases more and more towards the center - this is exactly why the sugar in the stirred tea collects in the centre, although "theoretically" it should collect at the edge since it is heavier than water). As early as the 1960s, a rather unusual toy was launched in the United States, which had a drum with a membrane on one side and a round opening on the other. A spring hitting the membrane did that

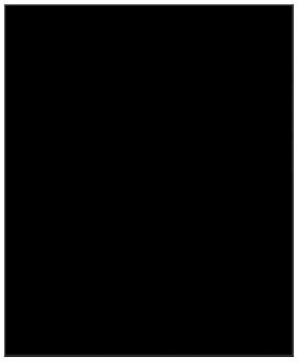
Formation of a torus vortex that rotates so quickly that it can be generated when there is no wind, e.g. B. in a closed hall, even 100 - 150 m could fly without noticeably losing energy. The problems began when it turned out that the smoked pretzel, even at such a great distance, could not only pierce a sheet of paper, but also cause skin injuries.

Because of this, the sale of the “toy” was banned.

Recently, however, something similar went on sale again, this time in the form of scaled-down copies (www.zerotoys.com). They shouldn't be that dangerous anymore. In fact, that would be just a minor oddity were it not for its historical roots, stretching back to the 1940s, and awareness that vortices were intended to pierce steel plates and shoot down enemy planes -- although the authors of the Allied intelligence elaboration were unaware of the mode of action and therefore misinterpreted the whole thing.

In the chapter on preparations for chemical warfare, an intelligence item was printed suggesting that the above principle also applied to poison gas cannons!





A photo sequence of soliton vortices in the plasma. All have a donut ring shape. It guarantees the highest stability. (archive of the author)

In the last chapter of this book I will come back to a German research project in the field of plasma physics, which may have been an inspiration for a current American project. It is realized under strict secrecy in the so-called "Sandia Laboratories", which are located on the premises of Kirtland Air Force Base. It is about methods for generating plasma vortices (solitons), which are characterized by such a high rotation speed that their relativistic effects are revealed. The project is called *Shiva Star* (if it is still going ahead).

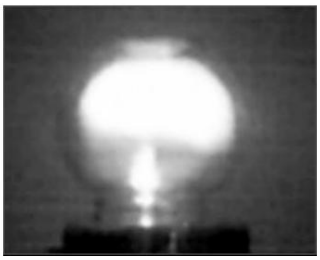
Its existence has been disclosed, but one should not hope for overly precise technical details. There is no doubt that it is important for drive technology – I will come back to this in the last part of the book. However, now I would like to discuss another aspect of this project, since there are direct analogies to the German concept of the *wind cannon ,* but they concern much larger energies. I have in front of me a note on this subject that was published six years ago in the monthly journal *Skrzydlata Polska* (“Winged Poland”). I would like to quote short excerpts from it:

> “Boeing Corporation's research center known as Phantom Works is working on the concept of a super-fast, plasma-engined aircraft powered by directed energy armament systems. Similar research Works is being carried out in laboratories [...] in Russia

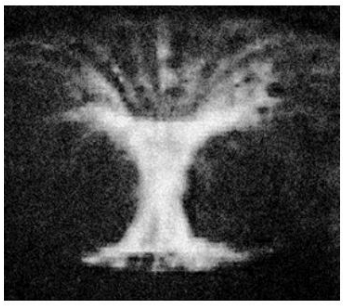
For some time, information has also been emerging about ways

Use plasma to avoid detection of aircraft by radars. According to the US, Russia has made huge achievements in this area. […]

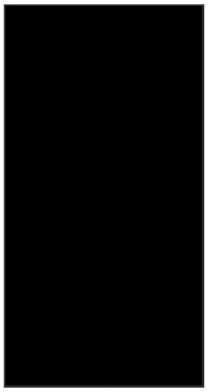
Since the early 1990s, the Americans have been working on plasma weapons designed to eject battle charges with tremendous energy. This work culminated in the 'Shiva Star' technology developed at the end of the decade. It is based on the accumulation of energy of the order of 10 MJ and its rapid discharge. In the American laboratories, a speed of 10,000 km/s (about 3 percent of the speed of light) has already been achieved for the ionized gas particles. Such plasma spheres could be candidates for missile defense systems to destroy ballistic missiles with multiple warheads."



A simple plasmoid can even be generated in a microwave oven (although it can be damaged), but it is characterized by a very low speed of about a hundred meters per second and not a particularly stable configuration. Speeds that are a thousand times higher can be achieved in special ring plasma accelerators. (Internet)



An interesting photo of a plasmoid. The structure of the vortex and its clearly defined boundaries can be seen precisely. (Internet)



Examples of mathematical modeling of ball lightning plasmids. (Internet)

We're talking, of course, about soliton vortices (in this case, the *relativistic* kind) which, due to the negligible energy dissipation in air and the lack of dispersion, represent a type of relatively stable projectile. Stable enough that its use was considered for defense against strategic missiles, ie in the case of very long ranges (which also testifies to overcoming the problems with huge amounts of energy)! "Depict" because there are indications that such a weapon was used on an experimental basis in Iraq. Here's another quote, from an entirely unrelated source, that dates back to 2003. One could ignore this information unless there was a clear connection with the description presented above: 61

A map showing the location of a secret American research facility (Sandia - in the corner) on the grounds of Kirtland Air Force Base in a remote area of New Mexico. It seems more than likely that the plasma accelerator there is related to a new technology for the American Air Force. It could lead to the construction of a new generation of aircraft and weapons based on "new" phenomena, although they were probably already known in the Third Reich. See also the chapter "Weapons of the 21st Century?". (Internet)

“Patrick Dillon also conducted an interview with people who witnessed the nightmarish aftermath of the use of America's superweapon. It was used during street fighting in Baghdad. The operation of this armored vehicle-mounted secret weapon was observed by Majid al-Ghazali, a soldier in the Iraqi infantry. He described both the weapon itself and its effects as something radically different from anything he had seen during his long military service.

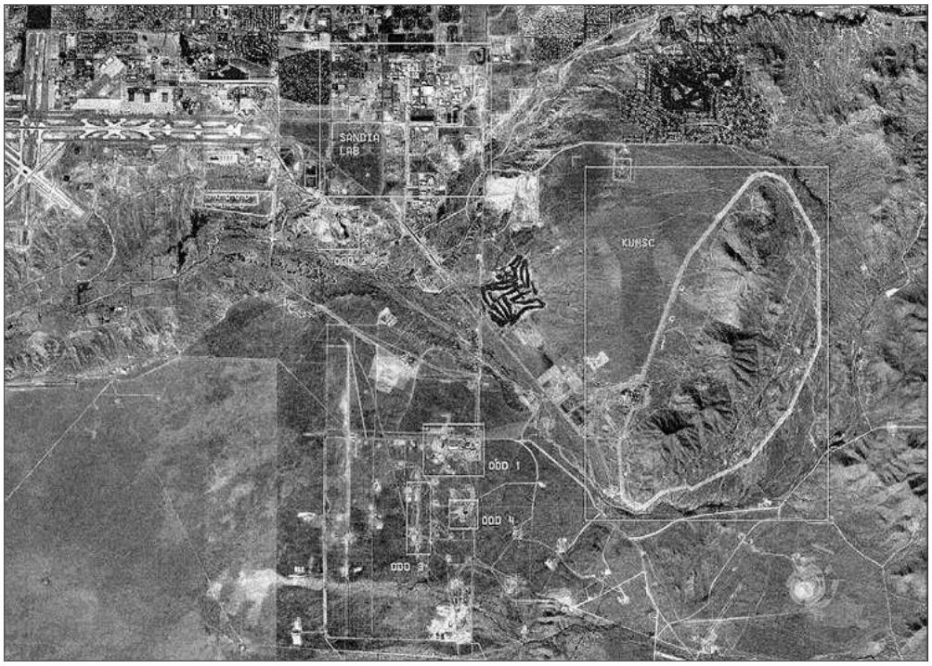
During the filmed interview, al-Ghazali described the weapon as somewhat resembling a flamethrower, but with a much higher destructive power. He claimed that it appeared as if the weapon had not fired flames but rather concentrated ball lightning.

Based on his many years of experience, al-Ghazali suspected that some form of radiation was probably responsible for the weapon's horrific effects.

Like all men in Iraq under Saddam's rule, al-Ghazali was

Conscripted to serve in the Iraqi equivalent of the US National Guard and has fought in three wars in the last 30 years. He has seen all types of conventional weapons used on the battlefield and is well versed in their effects on people and equipment.

On April 12, he and his family were hiding in the house when a heated street battle broke out nearby.



The satellite image of Kirtland AFB with the special area highlighted. The fact that the second largest supercomputer in the world was installed at Sandia Laboratories in 2006 testifies to the importance of the concepts developed there. The results of the analysis could therefore overshadow everything that appears in public publications. (Internet)

He noted that during the fighting the Americans called in a strangely built armored car. To his amazement, he suddenly fired a bright beam that looked like a fire with lightning bolts, hitting a large passenger bus and three other vehicles. Within seconds, the bus turned into a semi-molten mass that looked like a 'wet sack,' as al-Ghazali put it. He claimed that the bus instantly melted under the effect of the hot thermal shock and shrunk to the size of a VW Beetle. As if that weren't enough, he accurately describes the appearance of human bodies shrunk to the size of a newborn. On that day, since the end of local street fighting, this weapon burned alive 500-600 soldiers.

The city, which was covered with burned civilians and military vehicles, was bustling with American soldiers, who bulldozed the remains after the weapon was used

were left, dug very carefully. Al-Ghazali led Dillon to a place where they were buried. Dillon claims they easily dug up large puddles of congealed metal and mounds of a strange fibrous material left by the vehicle's tires.

Dillon had vast experience as a medical doctor, gained in Vietnam, and as a reporter, covering many wars from Somalia to Kosovo. He explained having seen many different operations targeting both humans and vehicles: 'I have seen many destructive ordnance in my life: flamethrowers, napalm, white phosphorus, thermite and many others.

However, apart from the hydrogen bomb, I don't know of any other weapon that could instantly melt a bus or shrink an adult human body to the size of a newborn. God, have mercy on humanity if this is just the introduction to what awaits us in the 21st century.'"

I have included these descriptions because I believe few people are aware of the origins of this technology.

On the other hand, it is shocking that the work in this area is so were far advanced, also in the context of drive technology.

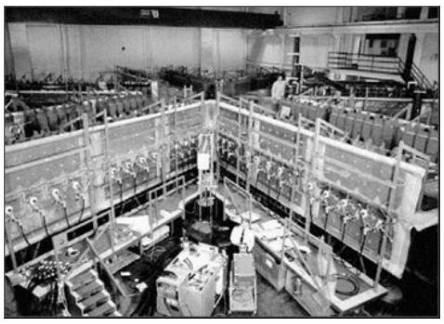
Secret Laboratories and facilities

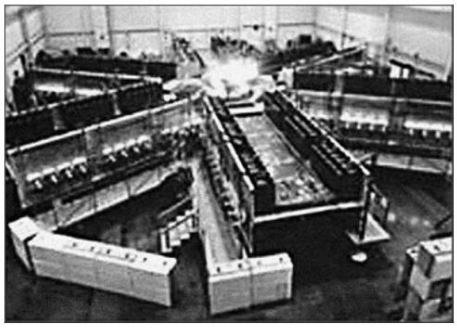
The places where all of what is commonly referred to as the “Secret Weapons of the Third Reich” was researched have already been described in countless publications. However, there are still a lot of ambiguities!

In May 2006, during my most recent search of US government archives, I managed to find a rather unusual elaboration by the US military intelligence service that contained a list of such locations. The list is very long and includes (a real rarity) references to all sources - a multitude

of reports, notifications, etc. It is much more important, however, that a relatively large number of the secret facilities and laboratories described were not previously known from any other source! The report is very extensive - it comprises 63 pages.

The report is all the more valuable because, contrary to the rules of the "Cold War", it also mentions places that came into the so-called "Soviet zone of influence" after the war - probably because it was written at the end of 1944. The post-war elaborations of 1946 or 1947 (BIOS, CIOS, JIOA, FIAT) are no longer so "careless".





The large accelerator for the production of isolated plasma vortices (plasmoids), which are characterized by very high speeds, on the Sandia Laboratories premises. These photos might suggest that the project is public, but appearances are deceptive. Neither technical data nor credible information about the aim of the project are published, although it has been implemented with uninterrupted intensity for more than 15 years. No information has been leaked at all for several years, suggesting that the project has entered a new phase. See also the chapter "Weapons of the 21st Century?", which describes shocking effects that could be observed in the case of such vortices - as a result of comparable research carried out with a much smaller accelerator of this type in Great Britain. (USAF)

In the hope that readers will also be interested

I now present a selection of the most interesting places described in the report (except for the facilities related to weapons of mass destruction - mainly chemical weapons - and their delivery systems, because the whole next chapter is devoted to that topic, as well as the very interesting facilities on the territory of occupied Czechoslovakia, as they were described in Volume II).

1. The production of secret weapons is highly decentralized, with the manufacture of the individual parts scattered across numerous factories. However, there are areas where factories are clearly concentrated, such as B. the Baden-Bodensee region. The reports indicate an acceleration of concentration in this region and an expansion of secret weapons production to southern Germany and Austria.

2. It is a large-scale production planning.

3. A comparison with [Department] A2 shows that the rocket bomb factories in Peenemünde, Manzell, Weimar and Fallersleben suffered heavy losses in July and August. The chemical plants in Höllriegelskreuth and Darmstadt (Merck) were also severely damaged. Other than that, no other secret weapons factories were bombed during those months.

4. The research work on the new weapons and their production are probably very advanced. There are reports that it could be a rocket for carrying high explosives, although there are other descriptions that point to a V2 [really?] ie artificial fog, incendiary aerosol and the use of non-magnetic hangars.

5. Experiments with beams, 'television bombs', a miniature submarine and a radio-controlled ship [rather motor boat].

carried out and could lead to the emergence of a similarly unconventional solution as the flying bomb.

6.

The production of poison gases is running at full speed and is decentralized.

7.

We received only one biological weapons report, received on August 13, 1944.

Conclusions

1.

It is possible that new secret weapons will be added to the arsenal, possibly related to the defense of southern and western Germany, where most manufacturing is located.

2.

There is new evidence supporting the notion that biological weapons could be used.

3.

The preparations for the (both defensive and offensive)
Use of chemical weapons are very advanced.

Description of the individual facilities: •

Augsburg – Bavarian Motor Works (BMW)

The V1 and V2 are manufactured in BMW's underground plants near Augsburg. The projectiles are stored in a small underground fort on the shooting range near Augsburg. In any case, these are rooms that reach about 20 m into the ground and hold about 50 pieces each.

(Source: OSS, RB-17463 pt. 08/16/1944. Classification: C-3.)

• Berlin-AEG

The research institute of the AEG company is located at the eastern corner of the intersection of Hollanderstrasse and Aroser Allee in the district of Reinickendorf, where photoelectric research work and secret experiments are carried out.

(Sources: OSS, A-23330, D-1129, 03/22/1944. C.)

A map of the German metallurgical works in Dÿbrowa Górnicza (Dombrowa) - from a report by the Polish Home Army. (Archive)

• Boeblingen (Germany)

In Böblingen, 16 km south/southwest of Stuttgart, there is a plant that manufactures certain equipment components for unmanned aerial vehicles.

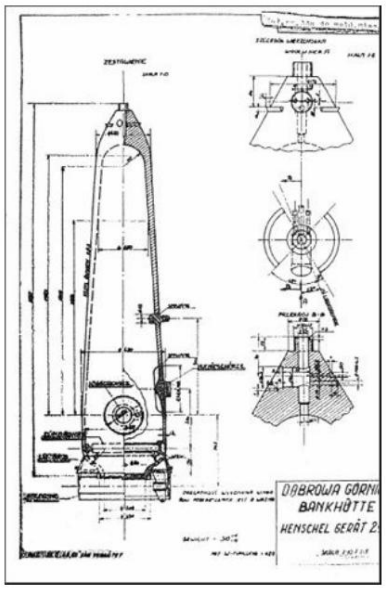
(Source: OSS, RB-13080 pt, from Switzerland, undated. Classification: C-3.)

• Bydgoszcz

Production center for secret weapons. The smaller model weighs 12 t and transports a 9 t mine or incendiary load. Some sea torpedoes based on this principle are under study. [In the forests near Bydgoszcz / Bromberg there is a large production bunker complex with a highly developed infrastructure. These are the former 'Alfred Nobel & Co. Bromberg' works, where powder and explosives were manufactured and various types of ammunition were filled.]

(Source: DGSS – Direction Technique SR 'Operations'. No. 9163 RG

Algiers. July 19, 1944.)



Technical drawings of the warhead for the Hs-293 guided missile. Elements for this floor were made in Dȳbrowa Górnicza. (Polish Home Army / Archive)

In the seemingly meaningless description of the 12-ton monster, most of which was supposed to be filled with a “cargo”, the information may actually be hidden that components for V2 rockets were also manufactured, which were not yet available when the report was being prepared were fired towards Great Britain.

The 9 t mentioned correspond fairly exactly to the fuel weight.

However, in the case of reporting about Bydgoszcz, it may just as well be something completely different and more important! Perhaps we are dealing with the description of a projectile with additional rocket propulsion for the large electromagnetic cannon. In any case, this fits quite exactly with a document that was printed in the second volume together with a translation. In this case, we would have independent confirmation of the existence of an unusual concept of armament, which not only was very advanced, but was also close to practical application! The document printed in Volume II mentioned that accidents were problematic for the Germans because of the powerful magnetic fields that occurred in the tunnel during the firing phase. After this

Namely, the weapon occupied a large underground facility on the French coast.

Was it an alternative to the V2 that is unknown today? We'll probably never find out.

• Eisenach (Germany)

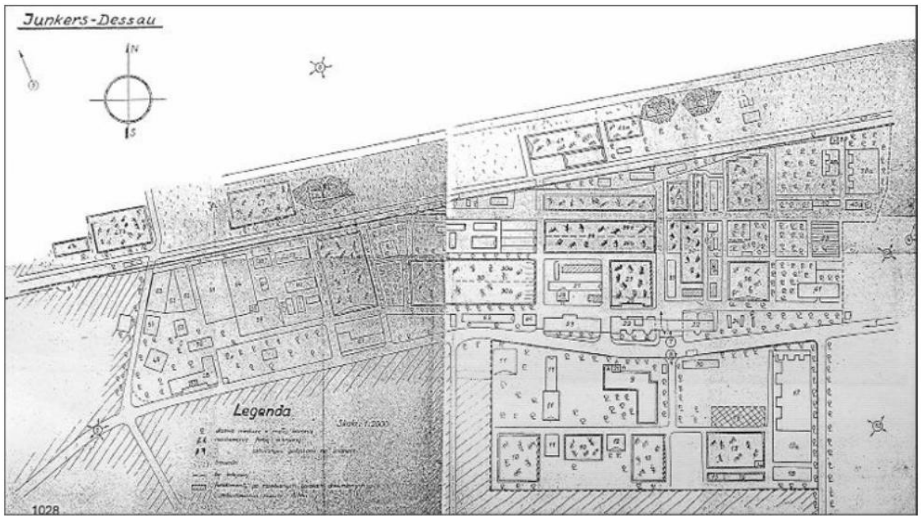
Has been identified as the site of a weapons testing facility in Berka, before Hainich in Thuringia. The official postal seal on envelopes reads 'Berka bei Eisenach' and on the franking machine 'Mihla bei Eisenach'.

(Source: Post censorship. NYPW 63892 from 04/08/1944, C.)

• Gernrode

Location of a factory with a proving ground for new types of guns. Entry is forbidden even to officers of a unit stationed nearby.

(Source: Allied Governments, London No. 2046. 08/01/1944, C.)



A map of Junkers aviation operations in Dessau prepared by the intelligence service of the Polish Home Army. (Polish Home Army / Archive)

• Göppingen - Speiser This

plant specializes in the production of cast workpieces - partly for the launch ramps assembled by the Schuler company. At the beginning of 1944, both Schuler and

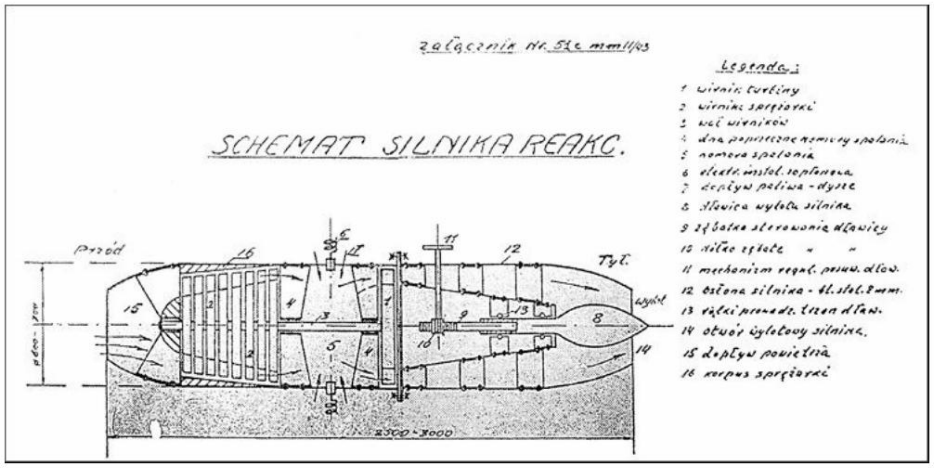
Boehringer under Wehrmacht control and formed a virtual unit headed by an unknown-name army major. In January 1944, the security guards at the Schuler works were replaced by young and healthy SS men, who were, however, dressed in security uniforms.

These three companies are practically indistinguishable from each other. They are located on the north side of the road from Göppingen to Stuttgart and extend in a westerly direction almost to the junction for Gmünd. If we start directly west of Göppingen, as well as north of the road to Stuttgart and the railway line, we first find the Speiser works. A little further is the largest and most important company - Schuler. West of it is the Boehringer site - east of the railway line to Gmünd.

(Source: Air Sec., CMF rpt. 1 / 91, 07/22/1944. S – prisoner of war.) • Gravelotte (Moselle, France)

It was determined that the secret weapons factory had been built deep within an underground facility located on the site of the Joan of Arc de Guise forts at Gravelotte and Vernéville. It is supplied with electrical energy from Fontoy.

(Source: France-Air NBG 2 / 940 June 1944. p.)



The scheme of a jet engine (Jumo?) made by the intelligence service of the Polish Home Army in November 1943. (Polish Home Army / Archive)

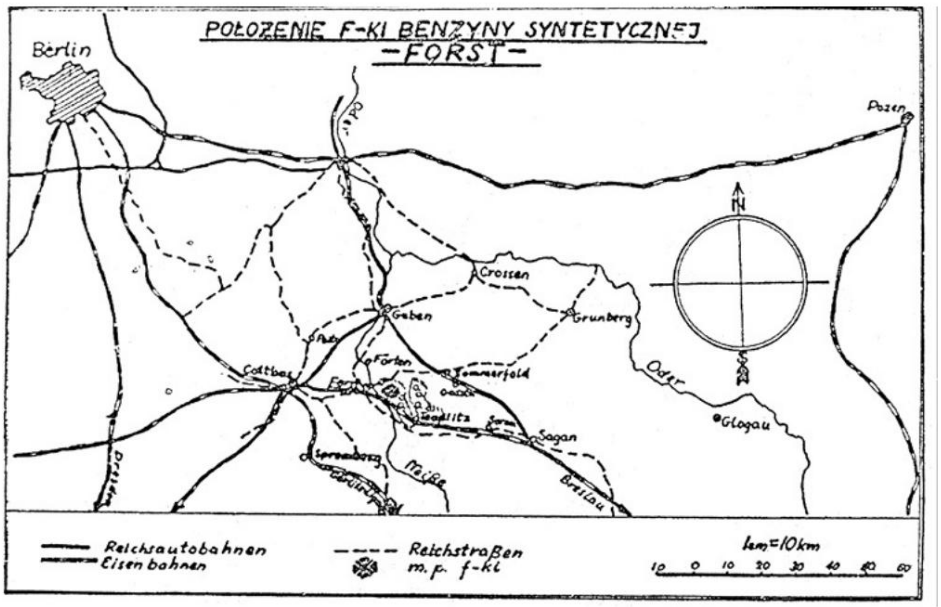
• Grudziÿdz (Graudenz), Poland - Junler Ruhr

A factory 'Junler Ruhr' cooperating in the production of guided missiles probably refers to the company 'Junker und Ruh' - formerly 'Herzefeld & Victorious' in Grudziÿdz. These factories make armor plates for submarines. According to the report, the company's foundries are currently being converted to the production of casings for projectiles and bombs.

(Source: Polish Intelligence Service, S-3148 / 44 undated. OSS.) • Halle-Niedleben – “the big airfield” According to a prisoner of war and an eyewitness, there is a large field airfield between Niedleben and Liskav near Halle.

All hangars are underground, and the parking lots can accommodate over 200 aircraft at a time. In 1943 he saw a Me 109, a He-111 and a Ju-199 there (the facility was not bombed until May 1944). The prisoner of war is an anti-fascist and was found to be credible.

(Source: CSDIC / WEST / NOI 410. 08/23/1944. C.)



The industrial facility spied on by the Polish Home Army near Zasieki (Forst-Berge) in Lower Silesia. (Polish Home Army / Archive)

• Houilles (France)

The Germans carried out extensive works 30 m underground on the site of the quarry in Houilles near the Montesson road (Seine & Oise). Many workers have reported that residents of all buildings in the area have been evacuated.

Some workers claim they are building a command post for Rommel, while others claim they are building underground storage for V1 shells.
The Germans make every effort so that the workers do not recognize the purpose of the facility.

(Source: France-Air. July 1944. P. JAQ / 37bis / 904.)

• Jessnitz

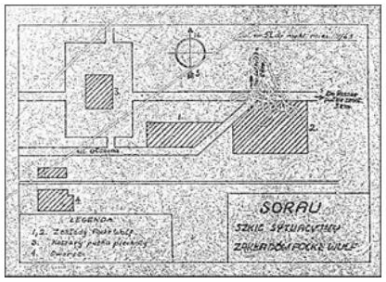
Two underground factories were built in Jessnitz, 39 km north of Leipzig, which were considered to be facilities 'of the greatest importance to the war'. It is not known at this time what they make, but they are likely related to secret weapons programs.

(Source: OSS, SUN-165. 07/15/1944. Source assessment: B-3. C.)

• Kapfenberg A

new cannon with a very short barrel is being built there, which fires projectiles with extremely high explosive charges [high explosive projectiles]. The destructive effect is alleged
enormously.

(Source: British documents on intercepted personnel and material.
Br.1313. 08/28/1944. S. Classified as credible.)



Plan of the Focke-Wulf works in ÿary (Sorau), Lower Silesia. (Polish Home Army / Archive)

• Klosterlechfeld

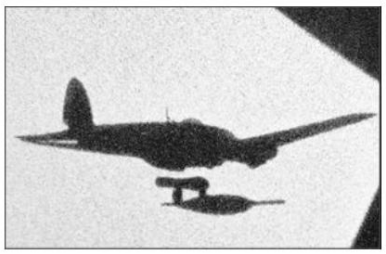
There is an underground secret weapons and

Ammunition factory, which occupies an area of 1,500 by 300 m. Klosterlechfeld is about 1,100 m east of the railway station and south of the road leading to the train station in Augsburg.

(Source: OSS, RB-17463 pt. 08/16/1944. Classification: C-3.) •

Kranj (Krainburg), Yugoslavia Large flying bombs are manufactured here, as well as the V2, the V3 and the V4 [?]

(Source: OSS No. 50450. 08/13/1944. Credibility unknown.)



An experimental launch of the V1 missile by a He-111 bomber. (German museum)

• Munich – Bavarian Motor Works (BMW)

The plant has changed its profile and is now engaged in the production of secret weapons.

(Source: a prisoner of war. BX-76. 05/18/1944. C.)

• Munich

A person working in Munich claims that the second secret weapon made here is a radio-controlled rocket bomb. A German major has claimed that 1,000 units will leave the production line in a month.

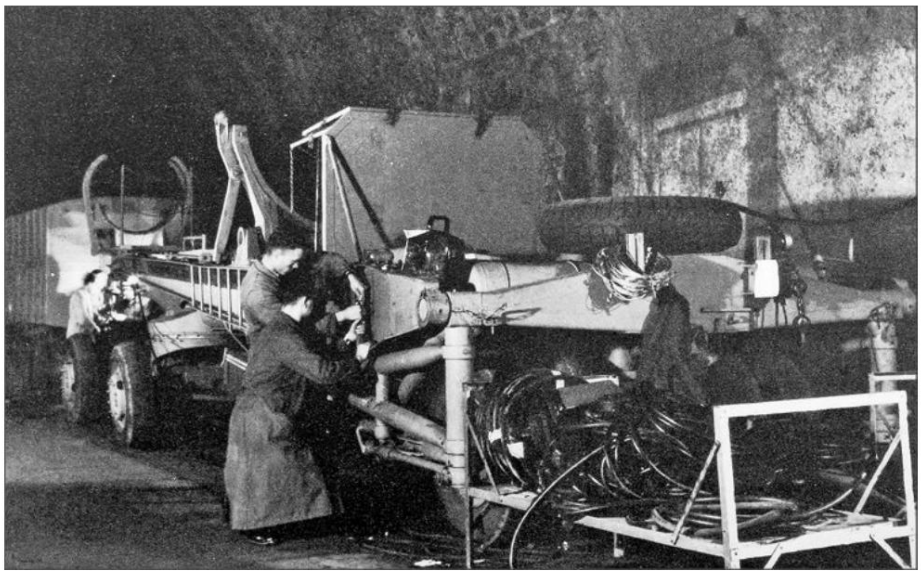
(Source: a telegram from Stockholm to the State Department. 09/02/1944. Secretary Johnson. p.)

• Maginot Line (France)

The assembly of components for the V2 takes place underground, at the Maginot Line facilities. The wine cellars in the Rhine Valley were also converted into workshops where parts for the V2 are made.

(Source: OSS. No. 27169 pt. 01.08.1944. Credible source. C.) • Neuburg On June 30, tests were carried out with a new secret weapon at the Heinrichsheim airfield (3 km from Neuburg).

(Source: CP&M report Br. BX-94. 08/18/1944. S. Classified as credible.)



Even the assembly of trailers to transport the V2 was done at an (unidentified) underground facility. (German museum)

• Oberhausen near Augsburg

There is one of the research and production centers for secret weapons that are probably connected to the V1.
Companies involved: Riedinger, Epple & Buxbaum.

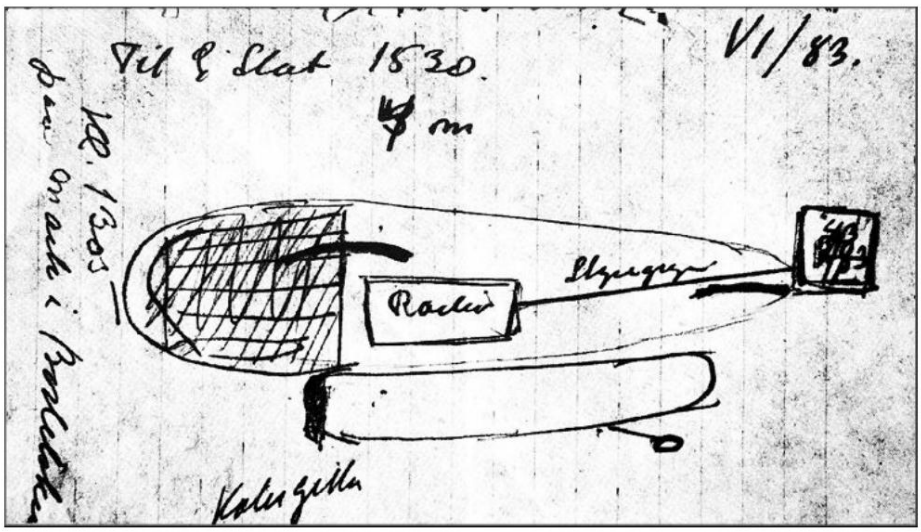
(Source: Dr. Franz Gutmann, member of the business school at the University of North Carolina, who emigrated from Germany because of the Hitler regime in 1939, classified as credible.)

• Oberraderach

According to the report, a huge factory for the production of secret weapons has been adapted in Oberraderach (4.5 km north/northwest of Friedrichshafen in the direction of Markdorf), occupying an area of many hectares. The factory is fenced and becomes strict

guarded. The workers are not allowed to leave them and are kept in ignorance.

(Source: OSS, RB-16214. 08/01/1944. C.)



One of the first hand drawings of the V1 bullet. (Archive)

• The island of

Rügen On May 10, 1944, a German prisoner of war made an emergency landing on Rügen. He heard from an officer that there is a research center on the east coast of the island related to the V1 aerial bomb program.

(Source: The POW is Alsatian and a Me-109 pilot who deserted in Italy. OSDIC Air Sec. CMF, Report I/108.

08/05/1944. p.)

The Germans mainly used the island of Rügen to install equipment for photographing rocket shells and measuring [flight parameters]. They were fired from a location north of Peenemünde on the island of Usedom [Uznam] and directed to fly exactly halfway between Rügen and Greifswalder Oie.

(Source: Prisoner of War 1203, April 10, 1944. p.)

Further rocket test launches took place in March 1944 in the north of Rügen.

(Source: Allied Governments #990. 07.04.1944. p.)

Regarding test launches of German secret weapons on the north coast of Rügen: The rocket was ignited from the ground and reached a height of 8,700 m. The exhaust flames only led to a weak rusty-red smoke [probably nitrogen oxides from the *waterfall -Rocket].* One after the other, strong explosions of great intensity were heard during the climb [it could have been the explosion of the warhead, preceded by a shock wave generated by supersonic flight; the hilly terrain may have caused different shockwave reflections to be seen at slightly different times].

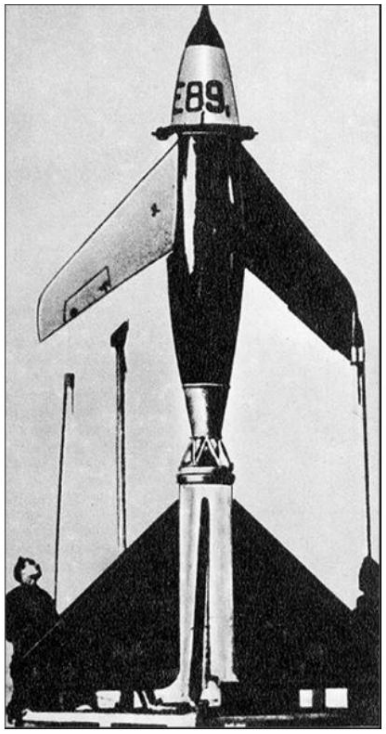
(Source: OSS, SZ-6064. 04/15/1944. p.)

As part of coastal defense, plans were also prepared for launching 6.20 m torpedoes from six-wheeled vehicles along the coast and from berths. Such attempts were completed on Rügen in August 1942. Such shore-launched torpedoes were to be used from early 1944.

(Source: Compilation of five POW interrogation records. No. 1456. 05/03/1944. p.)

An American post-war copy of the V1. (archive of the author)

A short comment on this: It looks as if there was a (certainly smaller) alternative facility to the one in Peenemünde on Rügen, the existence of which could be concealed! After the war, the island became a virtual Soviet garrison.



A French post-war copy of the *Rheintochter bullet* - the SE-4300. (archive of the author)

Solutier-Werke – headed by Dr. Maier from Huningue.

Previously they were based in Markradwitz in Bavaria, but in June 1942 they were moved to old Geigy and Uningue [?] near the Swiss border. Thermoelectric metalworking.
Important research laboratories are also located there. dr Maier is said to have said in the presence of four engineers that the plant was of key importance to German victory. Reich Minister Speer exercises direct control over the plant, which is closely monitored by the Gestapo.

(Source: Berno to the State Department. No. 5795. 09/03/1944. p.)

• Sommerda – Ardo

The company has built a twin-engine guided aircraft for transporting a rocket bomb weighing 4-5 tons including control surfaces. It is dropped at a distance of 20-30 km from the target. Their construction in Sommerda is considerably delayed, since the corresponding tools are only being sent slowly from France.

(Source: DGSS Direction Technique SR 'Operations' No. 9191. RG Algiers. 07/10/1944, classification: C-3. c)

• Tesno (Austria)

A deserter who defected to the partisans on August 13 and worked in Tesno reports that there are repair workshops for aircraft propellers and hubs in the shafts of a former mine. The source is convinced that these are the underground workshops that have already been reported.

(Source: OSS Washington DC Report #50662. 8/21/1944.)

• Vienna

The wife of a prisoner of war claims that under the Dreher Weinbrennerei (at the corner of Simmeringer Hauptstraße and Schlechthauegasse, opposite the Rennwager barracks) there is a secret factory two floors below. Nothing is known about the type of production.

(Source: CP&M Br. #1313. 8/28/1944. S. Classified as credible, unverified.)

• Vosges (France)

The Bussang Tunnel in Vosges is used to assemble the V1.
A train from Belfort arrives there twice a week.

(Source: OSS. RB-17126 pt. undated. Information from 31.07.1944. Classification: C-3. c)

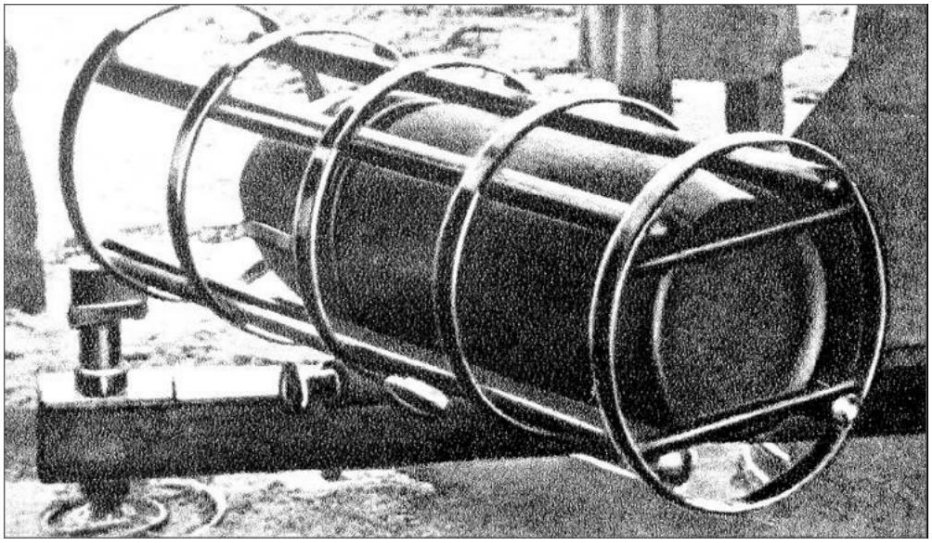
• Wittenberg - Kent's Factory

Kent's chocolate factory makes parts for flying bombs.

(Source: OSS, SZ-6272. 08/02/1944. C. Credible.)

The military research institute in Lutherstadt was relocated to the former chocolate factory […].

(Source: Allied Governments. No. 2160. 08/10/1944. p. Classification: B-3. Czech intelligence source.)



A prototype of the monstrous *June Bug* unguided surface-to-air missile . (Archive)

• Wustrow - Peninsula (Germany, in the Mecklenburg Bay, southwest of Rostock)

Now it is called Rerik Island. There, secret technical investigations are carried out in an extremely important research and test center. They concern:

1. 8.8 cm 41-42 anti-aircraft guns; 2. radio controlled aircraft; 3. Airplane to seaplane conversions; 4. Experiments with bombers and fighter planes; 5. a station for experiments with radar devices (Freya, Würzburg); 6. Radio systems and various technical equipment; 7. the Zeiss laboratory [the context leads to infrared technology

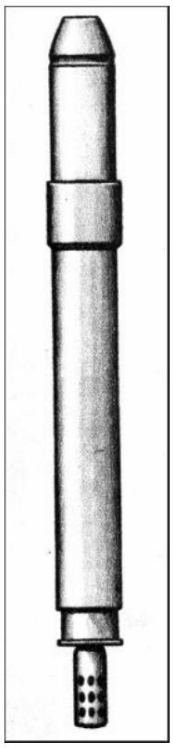
shut down];

8. Test benches for researching foreign aircraft and foreign firearms;

9. Research on the use of night fighters.

(Source: JEIA No. 2964. 04/24/1944, p.)

This place is a complete surprise, similar to the case of the nearby island of Rügen, it was obviously a developed research facility on the Baltic Sea that played a key role in the development of new weapons. Despite this, she was completely unknown until now!



The concept of the Luftfaust unguided anti-aircraft missile *from* 1944. (Archive)

• Zipf (Austria)

Bombs are filled at the facility, located between Linz and Salzburg, 3 km north of the railway line and at the foot of a mountain known as the Zipf (66 km southwest of Linz). The entrance to the factory leads across the premises of a brewery. The daily production is 90 bomb cars. The plant is located underground, but the overburden is a maximum of 4-9 m thick. The bottom appears to be sandy on the aerial photo. On the railway line in the direction of Marbarghausen and 4 km from the facility mentioned

There is a dam that would flood the facility in the event of a bombardment. Attention OSS: The last British report spoke of the manufacture of flying bombs on the site of a former brewery 15 miles from Salzburg.

(Source: OSS. GG-988. July 27, 1944. Classification: F-3. C.)

• Bisingen Highly developed parts for radar devices and the radio control of projectiles are no longer examined in Berlin, but in the 'Research Center E' [examined? produced? – a word is missing here], which was moved to Bisingen in Württemberg.

(Source: OSS. A-18911. RB-614. 01/14/1944. C.)

• Friedrichshafen

After the air raid on Friedrichshafen, the secret production sites were protected with artificial fog. This is the case in a forest east of the railway line in Kluftern, 7.5 km northwest of Friedrichshafen.

(Source: OSS. RB-14329, 07/11/1944. C.)

• Gessertshausen

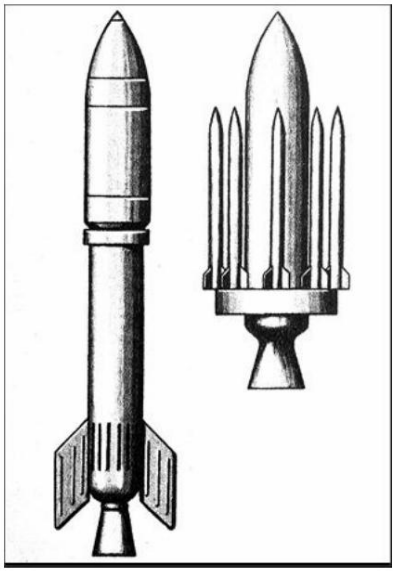
7 km from the road to Augsburg. There is a factory for rocket guns, next to it is a test site. The staff numbers 2,000 people, some of whom are quartered nearby, while others are brought in by truck from further afield.

(Source: London, Polish News Service. 08/15/1944. No. 2628.)

• Rudersdorf

The production of aircraft and anti-aircraft equipment takes place in natural and built caves in the Rudersdorf limestone mountains.

(Source: OSS. No. 27169 pt. 08/01/1944. Classified as credible, C.)



The concept of the German unguided anti-aircraft rocket *splitter Rheinkinder* from 1944. (Archive)

Here ends the most important part of the American report 26 , which contains descriptions of places where secret work was carried out, related to the general theme of secret weapons (except for those descriptions that relate to the themes described later in the book). A large part deals with B. with preparations for chemical warfare, to which the next chapter is devoted, so the corresponding descriptions can also be found there. The following subjects were also described as separate parts of the report: 1. Manufacturing and research facilities involved in the broader research field colloquially referred to as **"death rays"** - this term is used in the document (see Volume I). However, a majority of the reports relate to other research related to the use of electromagnetic radiation, with perhaps the most important report in the entire report (!) being related to nuclear technology. The message refers to Jáchymov in the Czech Republic.

2. Locations related to plans to introduce entirely new technologies and new weapons for naval warfare.

These are short additions, the first only includes three that

second four pages. However, given that we are dealing with a synthesis of information from many sources, it is nonetheless worth noting - all the more so since, of course, these are subjects which, despite everything, are very little known. Therefore, the additions mentioned, concerning the first and most interesting point, have been reproduced in their entirety.

The additions to the second point were subjected to a certain selection by me.

Let's start with the "death rays":

[missing location]

The second Nazi secret weapon is based on the principle of emitting rays based on X-rays. These rays damage the eyes and cause blindness that is temporary or permanent.

(Source: OSS. RB-16583. 06.08.1944. C. Classification: B-0.)

• Carteret

An experimental laboratory was set up 7 km from Carteret. Supposedly special experiments with death rays are carried out there. Four people who approached the lab in defiance of orders were shot without warning.

(Source: Polish Intelligence Service. S-8109 / 43. 02.11.1943. p.)

• Dresden - University

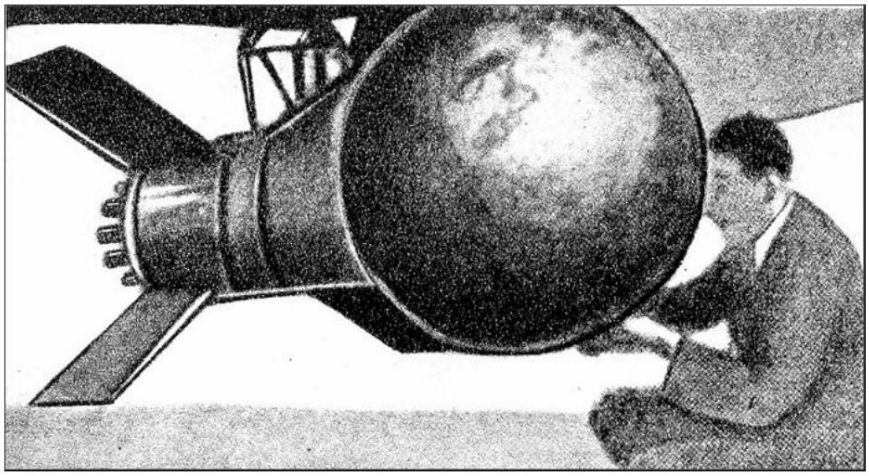
It has been determined that Dresden is the heart of the work on secret weapons. At the university, a group of engineers - chemists and professors - works under the leadership of Heisenberg. His collaborators are working on a by-product of radium [It is not clear whether this means a by-product of decay or production, which is a matter of principle. Nevertheless, this is a very interesting and extremely important report, it could confirm the already mentioned thesis that the Germans tried to build an explosive charge based on a mixture of different isotopes with a short decay time. She confirms an alternative view of the construction of a nuclear weapon].

The work will be carried out in a mine in Ústí near the

mine in Jáchymov on the territory of the Protectorate [ie Czech Republic].

(Source: a telegram from the military attaché in Ankara #99. 04/11/1944. *MIS Journal* (a military intelligence bulletin) No. 298. 04/12/1944. p.)

We will return to this aspect in the part of the book that deals with core work in the Czech Republic! The information relates to a previously virtually unknown, extremely important lead in connection with the German bomb.



The German SB-800/R-5 unguided special anti-ship missile based on the British *Dambusters.* The engine worked for only 2.5 seconds and was separated from the spherical shell, which bounced off the water, eventually hitting or sinking a ship. Experiments showed that the warhead could travel up to 2.5 km on the water surface in this way, jumping up to twelve times. (Archive)

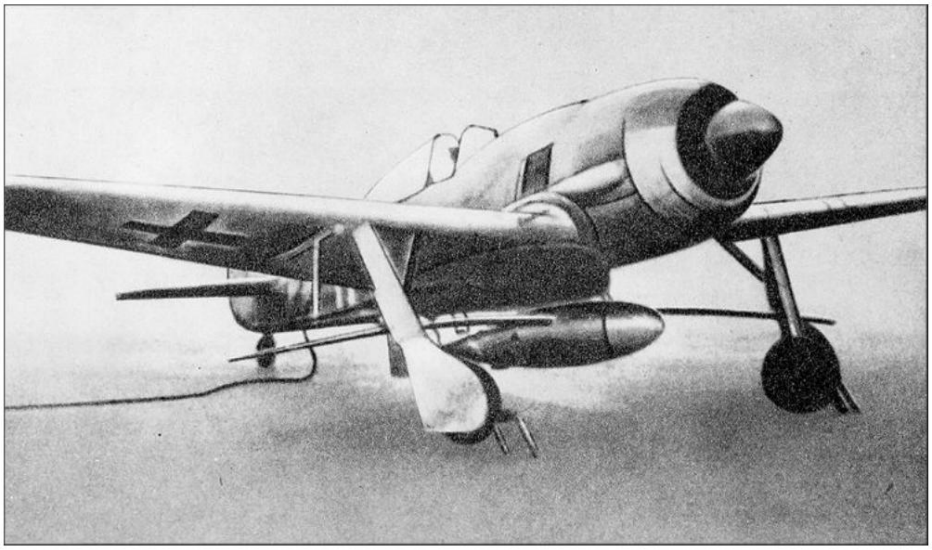
The mention of radioactive radium is perhaps just as important, however, and it is difficult not to tie it with unusual information about a Japanese submarine (I-29) published in a publication on Axis submarine operations in the Indian Ocean and is included in East Asia. It says that on April 16, 1944, the unit mentioned left the submarine base in Lorient (France) with the order, among other things, to deliver a load of "silver-radium amalgam" to Japan! 84 The fact that the allied

Command staff for the Pacific region intercepted and decoded a message from the Japanese captain (who, moreover, had been carefully selected from among the Imperial Navy's "submarine aces"), whereupon it was decided to purchase no fewer than three submarines (the USS *Tilefish,* the *Rock* and the *Sawfish)* to be sent to the western Pacific to sink the I-29. The mission was carried out and the mysterious cargo sank to the bottom of the 84 Chusa Sea in the Balintang Straits near Luzon around the turn of July/August.

Kinashi, commander of I-29, was retrospectively promoted two ranks to rear admiral, which was highly unusual.

As you can see, this matter seems to have been a completely forgotten, albeit very important, motif of German (and Japanese) research work in the field of nuclear physics!

Let's return to the analysis of the allies.



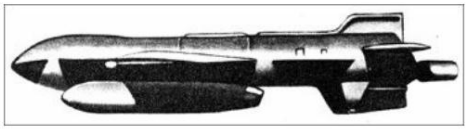
The very successful long-range BV-246 guided bomber from Blohm and Voss, suspended under the fuselage of an FW-190. A total of about 400 were made in many different versions, about half of which were used in combat, mainly against convoys in the far north. The bomb was a very interesting alternative for the V1 as it had a range of about 200km. There were versions with target search guidance for electromagnetic radiation sources (e.g. ship radars), with heat, acoustic and light direction finders. The weight of the combat part was 435 kg, the total weight 730 kg; it was three times smaller than the V1. The version with command-based remote control system was characterized by a similar impact spread as the V1. (Archive)

• Feldberg - a war laboratory

The laboratory is located in an isolated zone high on the plateau. It was mainly built underground and was completed in 1939/40. All villages within a 10-mile radius have been evacuated and occupied by laboratory workers, who number between 1,500 and 1,800.

Among the various experiments carried out in this laboratory, rays intended to destroy aircraft engines or kill people are also examined.

(Source: a report written on the basis of five interrogation protocols of a prisoner of war. Interrogation No. 1456. May 3, 1944. S.)



The Hs-295 guided missile, a further development of the Hs-293. (Archive)

• Hamburg (Wandsbek)

There is a huge underground factory that is said to be producing something very mysterious related to the Blohm and Voss company.

(Source: OSS, a Swedish source. 08/25/1943.)

• Rügen

A prisoner of war saw a hermetic ship of a completely new type, resembling a destroyer and capable of a speed of 34 knots. [Should it be a unit capable of fighting after the use of chemical weapons, or capable of transporting such weapons?].

(Source: a prisoner of war, B-633. 04/02/1944.)

As a supplement to the American Report 26 described above , the monthly reports of industrial espionage by the Polish Home Army (a Polish resistance movement) can be used, which have already been quoted and mostly relate to work on German 'secret weapons'. 16 Here

only a few reports seem interesting:

Information from September [1943], delivered at a meeting of the NSDAP in ÿódÿ: A magnetic reflector was invented that has a paralyzing effect on the electrical systems in airplanes.

(message 10 / 43)

• Bavarian Motor Works in the Munich area […]

According to information from December [1943], the following BMW plants are operating in the Munich area:

a) Factory I - in Pasing, in a southwesterly direction from the Allach railway station;

b) Works II – in Karlsfeld. Buildings located in the forest, on the right side of the Allach – Dachau railway connection, well masked, part of the production halls are underground. A dummy factory about 1 km from the Karlsfeld train station.
Production: allegedly aircraft engines and airplanes.
Employees: about 23,000.

c) Allach Plant – on the site of the former railway workshops.
Production: Engines. Employees: about 14,000. The plants in Allach are expanded.

(message 1 / 44)

• Dornier-Friedrichshafen

According to information from mid-December 1943, the air raids did not lead to the closure of the factory up to that date. Production includes the Me-323 aircraft, among others. Tests are said to be carried out on the factory premises with an unknown weapon.

(message 1 / 44)

• Region Peenemünde

[...] The production rooms are mostly underground [...].

[As mentioned, this is not the only source containing such information - no one has been able to get to these underground structures since the 1940s!]

(message 2 / 44)

The unknown plan, a new one to unleash the war phase – that Arsenal of breakthrough

As I wrote in Volume II, few researchers and historians are aware of the magnitude of the German preparation program for unleashing chemical warfare, what a destructive arsenal it was, and what great hopes were entertained as a result. Despite the enormous effort I put into gathering the most complete information possible (this is probably the most complete account of the subject to date), I managed to get to even more recent, previously unknown documents and descriptions, mainly during my Searching the American archives in 2006. Before presenting all of this, however, I would like to make a brief summary of what was discussed in the previous volume. A review of the most important facts is indispensable, especially for those readers who did not have the opportunity to read the second volume.

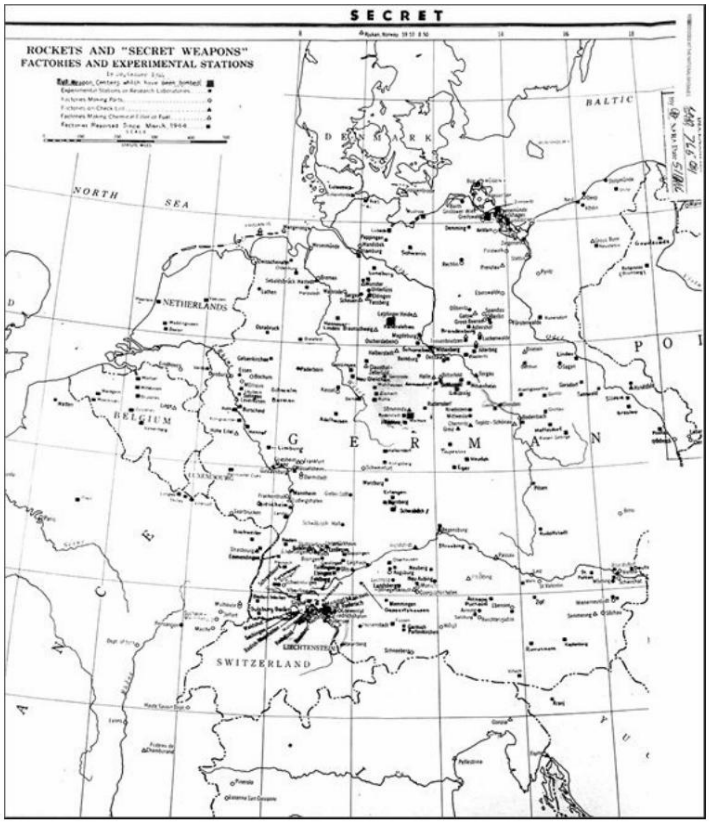
The first and most important information concerns the completely revolutionary character of this arsenal. It is about so-called “phosphoric acid esters” – tabun, sarin and soman. Not only were they an order of magnitude more toxic than the Allied agents, but more importantly, they could not be contained by any filters known at the time, and were absorbed through the skin almost as easily as through the lungs.

This set a quasi-precedent: **a weapon was created against which there was no effective protection!** But what did this toxicity mean in practice?

The tabun produced most often resulted in almost instantaneous death at a concentration of about 0.4 g in one cubic meter of air, but even fractions of a milligram per cubic meter led to more or less severe symptoms of paralysis after a long period of time (which corresponds to approximately the fraction

one cubic millimeter, i.e. corresponded to a small droplet!). All substances from the mentioned group (sarin and soman were even more toxic) acted directly on the nervous system. The first symptom of poisoning, which appeared even with the smallest doses, was blindness - which was enough to incapacitate a soldier. A slightly higher dose or longer contact resulted in muscle paralysis and cramps. The "deadly" dose paralyzed the nerves that control lung function and caused asphyxiation. If we compare these milligram quantities with at least 10,000 tons of stocks, we must conclude that even under the most unfavorable distribution and atmospheric conditions, over a billion people could have been killed this way!

The factory in Brzeg Dolny (Dyhernfurth) alone delivered 1,000 t per month - according to the words of an ex-prisoner who worked there, an almost "dizzying" amount. As already mentioned, the main problem was the lack of a “strategic vehicle system” that could have turned these abstract parameters into concrete arguments in peace negotiations.

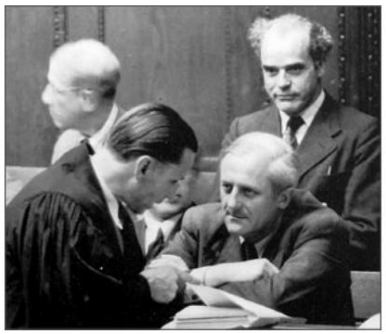


A map attached to the report described in this chapter - places associated with the "secret weapons programs" have been marked on it, much of which has not been marked with great detail. What is surprising is the fact that there are almost no interesting facilities in Lower Silesia on the map at all! Was the inter-allied censorship supposed to have worked as early as September 1944? An interesting detail is the name "Giant Mountains", which usually designates a sub-mountain of the Sudetes, but it can also refer to the *giant .* In this case, however, the keyword on the map has no equivalent in the form of a message in the report. That's an exception to this report, but it confirms the rule that Western intelligence sources treat the subject of *giants* as taboo—it simply doesn't exist. It's hard to believe that it was an accident, after all, it's one of the largest armament projects of the Third Reich in 1944. Some time ago, during a conversation, an intelligence official expressed the opinion that that's why such significant restrictions were made , since the US strategic command facility under Cheyenne Mountain was modeled after the *giant .* Indeed, his plan shows certain similarities – there, too, the tunnels were drilled from different sides of the massif, and the "centre" is under the highest mountain, where huge halls were built under a natural gneiss dome. It is, of course, a hypothesis, although the fact remains that no information about the *giant* is disclosed. (NARA)

This all led to a situation where the Germans could, at least in theory, have stopped the enemy armies as late as 1945! The "problem" I mentioned was already described by me in Volume II.

Overall, the difficulties were also related to the fact that the Third Reich was not able to control its airspace. In this situation, any "partial strikes" would have provoked Allied carpet bombing - this time using chemical and biological weapons (the Americans planned to produce two million pieces of biological bombs!). It is irrelevant that they were outdated and did not differ significantly in terms of their effectiveness from [illegible] to [illegible] they sense only if there had been a real threat to which Hitler could respond with a concentrated and all-out retaliatory strike, or rather second strike, impossible to stop and not confined to the European theater of war. In short, the Germans needed a strategic weapon that would be just as difficult to hit as the V2, and one that

could not have protected against the consequences of their application. Then the Allies would no longer have been interested in an escalation of this new phase of the conflict, because regardless of what they did, their losses would have been unacceptable.



dr Otto Ambros - head of the "Special Committee C" in the Reich Ministry for Armaments and War Production, which was responsible for the preparation of a chemical war - here at the trial in Nuremberg. (Archive)

Overall, "modern" drugs that paralyzed the nervous system were only made in select facilities. However, unlike nuclear weapons, their production did not require nearly as many resources. It should be emphasized that the factory in Brzeg Dolny (Dyhernfurth) was considered the most important. The plants in Gendorf / Bavaria and in Ammendorf near Halle were also selected for this task. In 1944, as part of large-scale preparations for chemical warfare, work began on adapting another existing chemical warfare agent factory, located in Falkenhagen near Seelow, several dozen kilometers east of Berlin. It was a large and very modern facility, although it had been built in 1938. It occupied several above-ground buildings, as well as a complex of underground bunkers totaling about 15,000 square meters (underground). The caustic nitrogen *substance* (ClF3) was previously produced in Falkenhagen. After the "transformation", however, it was to become the most important (if not the only) plant in the Reich that was to mass-produce sarin. According to some sources, production could not be resumed, although this contradicts Speer's statement, which is printed below.

This all resulted in the production of at least 10,000 tons of nervous system debilitating materials, including at least 155,000 bombs and 9,000 artillery shells filled with Tabun.
This description relates only to the "undisputed" production levels at facilities that could be identified as such after the war; however, the intelligence information given below clearly indicates that production plants may also have existed which are currently unknown!

Of course, I wasn't the first to become aware of the existence of these "supermodern" chemical weapons in the Third Reich. However, most authors neglect the fact that operational plans and delivery systems had to be developed parallel to the production itself.

This was exactly the case, as evidenced by a number of hitherto "isolated" facts (the new ones are given elsewhere in this chapter). Professor Mieczysÿaw Moÿdawa, who had access to a lot of unique information due to his employment in the so-called "Technical Office" of the Gross-Rosen concentration camp (which was involved in many Lower Silesian projects), claimed e.g. B. that the German advance into the tabun factory in Brzeg Dolny had a slightly different goal than generally assumed. As a reminder: After the Russians had occupied the factory, a Wehrmacht commando unit was given the task of penetrating into the rear of the Soviet troops and bringing the aforementioned target under their control at least for a few hours. In an interview I conducted and filmed, Professor Moÿdawa spoke not only about the need to destroy stocks of these substances, but above all about emptying the safe, which contained top-secret plans for the new phase of the war!

Otto Ambros in 1945. (Archive)

That there were such plans could already be read “between the lines” of the chapter on anti-tank weapons printed in this volume. In the previous volume, a statement by Reich Minister Speer was printed, in which he used the expression "hasty preparations" (for the new phase of the war) and described Tabun as "one of the miracle weapons of the Third Reich".

In the early 1980s, some sources in the West became aware of this topic revealed. The British *Sunday Times* wrote at the time: 28

> "Hitler wanted to die like a Wagnerian warrior in his Bavarian fortress and leave only desert around him. He wanted to incapacitate his enemies with a cloud of gas and destroy all life around them.”

A credible and at the same time important confirmation of such plans is the fact that practically all of Hitler's headquarters, as well as the industrial command fortresses located in the mountains (the Riese complex in Thuringia) in the final stages of the war, on the one hand, taking into account the possibility of surviving a comparable (or . atomic) Counterstrike were built, but on the other hand connections with German weapons of mass destruction are visible. This concept can be seen in the following facilities: 1. Thuringia - in the area around Jonastal a monstrous

conglomerate of central plane command facilities was built, carved deep into the mountains *(S-4, Amt 10* and *Jasmin).* Even as underground facilities they were much better protected than e.g. B. the former bunkers near Kÿtrzyn (Rastenburg), but the connection with German weapons of mass destruction is also striking -

possibly in the form of an arsenal attached to the "Fortress" itself. The most important nuclear research laboratories were also moved there (to Stadtilm), and the most dangerous chemical weapons were also found in the valley area after the war. [29]

2. The area around the Riese complex in Lower Silesia can be considered as a second fortress in which there was a connection between the command center under the castle in Ksiÿÿ (Fürstenstein) and the industrial and research center, to which the Owl Mountains themselves, Ludwikowice (Ludwigsdorf), a facility under the second castle in Ksiÿÿ, and Strughold's strategic weapons research facility in Szczawno Zdrój (Bad Salzbrunn). Here too, on the one hand, the choice of unusually hard rock and the accommodation of the central sector of the Riese complex under a natural gneiss dome with a 200 m high overburden are noticeable, on the other hand, there is also a connection to German weapons of mass destruction. There are two credible witnesses who claim this - including the aforementioned Professor Moÿdawa. In an interview given a few years ago, he spoke of an arsenal of chemical weapons. It was among the strategic weapons to which the complex was dedicated. An excerpt from this interview was printed in Volume II.

[31] The second witness who provided virtually first-hand information was Dr. Jack Wilczur. 32 In the early 1990s, on behalf of the Main Commission for the Investigation of Nazi Crimes, he explored an underground facility belonging to the Riese complex, which is located a little further south (and below) the well-known “Osówka” facility, and in which pioneers who who secured the measures again found radioactive ore residues.
Claims suggesting similar connections were also made by Anton Dalmus, the complex's former chief energetics engineer.

3. The new trend (1944) in the construction of command facilities at the central level is also represented by an underground bunker complex in Pullach near Munich. As it has been completed, it makes it possible to observe elements e.g. B. the Riese complex or the *S-4* were not yet available. Immediately after the war he was

Allied officers who were shocked by the level of technology he represented. What surprised them most, however, was the unusually modern anti-chemical protection they were seeing for the first time. 30 In their report they mentioned equipping the internal ventilation system with air conditioning (that was a certain phenomenon at the time). The entire system generated overpressure, which, in conjunction with a modern unit that chemically neutralized any toxic fumes (!), allowed the facility to continue operating “virtually indefinitely” even when the latest chemical weapons were used, as noted in the report. There was also a room for chemical decontamination of contaminated people, including appropriate suits.

So you can see without a doubt that Hitler's skeptical attitude or Indecisiveness, which could still be observed in the summer of 1943, experienced a fundamental reassessment. We have to realize that these could not just be concerns about an Allied chemical attack. The Allies were aware of the German achievements in this area, and they would certainly have been able to mentally link these achievements at least to the V2 rockets, against which there was no defense. The Third Reich's preparations for full-scale chemical warfare could only spring from its own offensive operational plans and from the fact that it was the only area in which Germany possessed crushing superiority over the Allies. It was an monstrous arsenal.

So what was Hitler's attitude on this subject? At first she expressed an optimistic interest, which became all the greater as the tendency to shift the eastern front line to the west became more and more apparent. On May 15, 1943, Hitler convened a conference in the *Wolfsschanze* in East Prussia. Otto Ambros, the head of the "Special Committee C" in the Speer Ministry, who was responsible for the preparations for chemical warfare and at the same time a member of the management of the IG Farben concern.

[27] Hitler demanded full clarification as to whether a corresponding arsenal was also available from the

Allies could be used. He is said to have then asked the question: "What is the other side doing with the gas?". Ambros testified at the Nuremberg Trials after the war that he had deliberately misled Hitler in order to prevent such a destructive phase of the war from unfolding. He reportedly said that because of "better access to ethylene, the enemy probably has better ability to make mustard gas." The leader is said to have interrupted him and emphasized that he was not concerned with traditional toxins: "I understand that those states that own oil can produce a larger amount, but the Germans have a special gas - tabun, which we in Germany have a monopoly". Ambros took on a rather risky gamble by claiming that the production secret for Tabun had gotten to the West before the war. He added: "If the Germans use Tabun, they must expect it to be produced in even larger quantities by the Allies." Hitler allegedly then left the meeting.

I repeat: This report is based solely on the post-war testimonies of a person who wanted to avoid death. He probably would have been executed if he had admitted that he had directed the relevant preparations - which he had!
His statements do not sound particularly credible, especially since, according to Ambros, information leaked through official German pre-war publications which are said to have contained production specifications. Such claims - if they were actually made - would be risky in that such publications did not exist.

Still, Hitler had no reason to believe such "disheartening" protestations. He had an entire intelligence apparatus at his disposal that confirmed that the Allies (and the Russians) knew absolutely nothing about phosphate-based weapons.

[27] In reality, they found out about this only after the war: the Russians were particularly lagging behind in this area. Incidentally, I can remember watching a Russian documentary where someone mentioned that there was a chemical munitions filling plant in Moscow during the war, where crippled children worked, pouring toxic liquids with tea kettles! The workforce was supplemented every two weeks.

On March 1, 1944, Dr. Ambros Hitler allegedly once again

without first ascertaining whether the Allies might not be able *to* work on substances that paralyze the nervous system. And again, that doesn't sound particularly believable, since around this time the preparations in the Third Reich were being intensified and Ambros kept his post. The scope of preparation can be clearly seen from the information printed below.

However, before proceeding to the presentation of new information from the documents, I would like to come back to the above-mentioned mysterious episode of World War II: the advance of a commando unit to Brzeg Dolny, which also includes the description of the factory itself (which was of key importance).

The construction of the above-mentioned company, which was code-named *Hochwerk ,* began in 1940 with the help of 120 French prisoners of war. Soon they were supported by about 800 Italian workers and 80 German specialists, who received the status "uk" - "indispensable". This meant that these people became “bearers of secrets” and e.g. B. could not return to the ranks of the army. Subcamps of the Groß-Rosen concentration camp were later built, named *Dyhernfurth I* and *Dyhernfurth II .* At first there were only several hundred prisoners, but over time they were expanded and at the peak they housed at least 2,500 people. Here is a quote from an article on this topic: “The prisoners worked in a separate hall to which third parties only[27] had limited access. The level of

> secrecy was so high that the SS guards supervising the camp could not observe the prisoners at work, despite procedural declarations of secrecy. During the unloading of the projectile casings, which were ready for gas filling, high screens were set up around the wagons. Thick pipes were laid to the insulated factory floor where the projectiles were filled, with which the gas from containers [tabun was a liquid] was supplied. The tubes in which the reactions took place were covered with quartz and silver. The rooms used for finishing production were closed off by walls of double glass, between which a pressurized air cushion was maintained. The doors and

> Windows of the hall were sealed airtight; For ventilation purposes, air was blown into the interior of the hall through ducts placed in the floor, which was supplied through very high chimneys. The rooms were periodically disinfected [rather, decontaminated] with hot steam and ammonia. In order to ensure the safety of the gas transport, the boxes damaged during transport were repaired in the carpentry shop and sealants were prepared to fix the finished gas carriers in the wagons.
> There was also a stand for filling the bombs with gas, a room for filling artillery shells and glass containers, as well as marking and control stands. The gas produced was stored in a bunker magazine adjacent to the production building.
> The liquid tabun was poured into the projectiles by machines, and part of the production was carried away from the factory in cisterns. […]
> By the end of the war, two [factories] managed by the SS were set up, which produced around 500 tons of the corrosive 'N-substance' (chlorine trifluoride) per month. Colonel Ochner described the new gas as so strong and extraordinarily effective that death could only be avoided by using the 'green cross mask', which protects against the strongest gases. Little did he know when he said that tabun and sarin are so corrosive that even using the best gas mask doesn't help much when you're in a gas cloud. The large gas factory with the alias 'Hochwerk' also had an underground subsidiary factory in Krapkowice (Krappitz) in the form of a hall that served to fill artillery ammunition with gas."

An interesting and little-known motive emerges from the above quote, namely the SS administration of chemical weapons production, which contributed to the content of one of the subsequent chapters concerning Himmler's assumption of control of the most promising armaments sectors. It would therefore be worthwhile to take a closer look at this subject. In short, the example above is not the only one that illustrates this phenomenon. In the case of this area of armaments, the connections to the SS are particularly clear, even if they are complete

information is missing.

1. Such facilities as e.g. B. the *giant* or other underground factories were usually under SS supervision (Kammler), if only for the reason that they were underground. In addition, the labor force (prisoners) fell under the competence of the SS.
2. The same applies to places that dealt with delivery systems (strategic weapons). The cement complex in Austria, which was to serve the research and production of ICBMs, was subordinate to Kammler. The research team in Pilsen, which worked on new propulsion solutions for strategic weapons (described below), was also subordinate to the technical office of the SS leadership main office (SS-FHA), i.e. the SS. The associated work carried out in Lower Silesia is described in the previous volume have been described were also a domain of the SS, although cooperation with the Luftwaffe did take place.
3. Reich Minister Speer mentioned Hitler's ambitions in this area in his "Slave State". The following excerpt is significant: “But in the case of the [already mentioned] N-substance, for Himmler it was ultimately a matter of getting the production of the nerve gas sarin into the hands of the SS. Sarin was our most advanced warfare agent, surpassing the effectiveness of any warfare gas produced to date [about twice as powerful as Tabun, but less stable and more difficult to manufacture]. In addition, there was no way of defending himself against him because the gas masks and filters known at the time had no protective effect. Sarin could therefore one day be an important factor at least in blackmail in an inner-German power struggle between the Wehrmacht and the SS. After July 20 [after Hitler's assassination] such considerations could no longer be regarded as absurd. In the spring of 1944, the army had refused production of the N substance; this was supposedly an inextinguishable chemical fuel, similar to the legendary 'Greek fire'. At the beginning of 1944, Hitler then realized that he had decided to hand over both the testing and the production of the N substance to the SS. I pointed out to Hitler that if possible a chemical factory should be operated within the

entire chemical production. Hitler changed his mind. However, he [still] wanted to 'order the Reichsfuhrer SS to carry out a test and assessment of the N-substance and only then decide together with me [it should probably have meant "without me"!] whether the production of the N- matter remains in our hands'. On July 7, 1944, Hitler had the Chief of Army Staff, General Buhle, order again that 'the Reichsfuhrer SS should accelerate further tests with N-material'. Three weeks later I spoke to Hitler about the intentions of the SS to produce the not yet tested N substance without further ado: 'At the time I convinced the Fuhrer that the Waffen SS should not initially take over production, but that it was sufficient if the Waffen SS took over the testing of the N substance. Even today I think it would be wrong if the production of the N-substance was taken over by the Waffen-SS. After all, only IG-Farben in Germany has the skilled workers needed for the ongoing innovations in the chemical process. […] I cannot initially agree to the takeover of production at Falkenhagen [the factory was described a few pages earlier] by the Waffen-SS because a key warfare agent facility has been set up next to and in connection with the N-material facility. A double management does not seem sustainable. The Sarin warfare agent produced in Falkenhagen is the most valuable and modern of all warfare agents and has six times the effect of all previous warfare agents. […]

Hitler no longer spoke of the SS taking over production of the N substance. But despite the negative report from the highest SS specialist authority [with regard to the combat use of the N substance], the SS had at the same time taken possession of the factory in Falkenhagen, which was valuable because of the sarin production."

In the summer of 1944 the preparations of the Reich population for chemical warfare entered their full phase. (AKG)

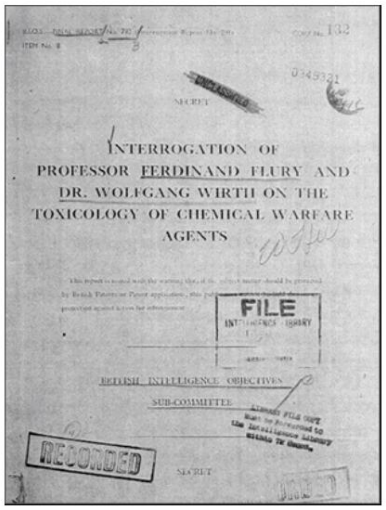
4. Himmler undoubtedly wanted to play a key role in the chemical war that was being prepared, and in which great hopes were pinned on saving the Third Reich. This tendency was not only visible at the central level, but especially when we look at the many smaller projects that were being implemented far from Berlin and of which Speer, who jealously guarded his sphere of influence, did not even need to know. The research center in Lubiÿÿ (Leubus) represented such an example “in the area”.
According to numerous reports, research was being carried out there on a weapon of mass destruction, including biological and chemical ones. Interesting descriptions can be found in the publications by Sukmanowska and Anna Lamparska. The following quote comes from a book by the latter author: “There was a strange gas in the air, irritating the lungs and eyes, like tear gas.” In one witness account spoke of underground rooms in which Germans in white Smocks worked, there were also glass walls, which we already know from the factory in Brzeg Dolny. Immediately after the war, in one of the buildings in nearby Krzydlina Wielka (formerly: Groß

Kreidel) found, among other things, small vials or rather ampoules, which reminded of glass containers for infusion solutions, but were smaller. Since the new residents of Lubiÿÿ had to deal with a plague of rats, which appeared “out of nowhere” in many unexpected places, at some point someone had the idea of putting a couple of rodents in each hole useless, because unlabeled ampoules (they were only provided with colored stripes). It must have been an effective remedy, since

in this unexpected way not only the rats, but also dogs and cats were exterminated (so-called "phosphoric acid ester-based poison warfare agents", which were manufactured in nearby Brzeg Dolny an der Oder (Dyhernfurth), led to the mass death of animals, even a small ampoule with a tabun or sarin solution could therefore have killed all living beings in a large but closed building). Everything indicates that this facility was also under the control of the SS.

5. It should also be noted that the SS did not want to just take over the chemical arsenal. In Pokrzywno (Nesselstadt) there was the only important research facility of the Third Reich in the field of biological weapons - it was also managed by the SS!
Supposedly because the Wehrmacht wanted nothing to do with human experiments. Another element is the works from the field of nuclear research in the Czech Republic described below. They were carried out in such secrecy that even Speer not only had a very vague idea of their character, but - as he admitted after the war - almost nothing knew of the existence of a special SS office to which these research teams were subordinate (SS-Führungshauptamt, Amtsgruppe "A" - T.Amt VIII FEP), and to which we will of course

 come back.



Front page of a British intelligence report on tabun - it was only after the war that the Allies realized what a deadly arsenal the enemy had at their disposal. (NARA / BIOS)

These little-known facts justify the thesis that if third parties (existing!) the Rich In fact be WMD arsenal—which wasn't a very distant prospect—it would have been largely an "SS war."

It is not difficult to conclude that if the SS had taken over the chemical arsenal (and any other weapons of mass destruction, if any) and applied them on a strategic scale, they would undoubtedly have become the dominant force not only in the German Reich itself, but perhaps also on the whole world would have become!

The importance of preparations for chemical warfare is also confirmed in a certain sense by the already mentioned surprise attack of the German special command in February 1945 on the factory in Brzeg Dolny. I would like to come back to the article already cited, which contains an excellent description of this interesting incident:

> “The Russians occupied villages and towns without securing the extensive area. They merely manned key positions and observed the area in case a counterattack became necessary. The German front-line units in this area consisted of mixed groups of veterans, soldiers who had survived the defense of the Vistula Line, the German Volkssturm and the HJ. All were equipped with all the necessary weapons, prepared for combat and well suited to participate in operational teams. The reconnaissance troops, in turn, reported that the enemy positions were very easy to deal with. These reports were very quickly confirmed as the general approached the river with two troop officers. A Russian [Soviet] light machine gun immediately opened fire behind the river, injuring the two officers. The general continued the reconnaissance, slowly returning to his position. He watched the mined bridge, which on the German side was directly above the drift ice that was on the

Water piled up, hung in tatters. On 'their' end of the bridge, the Russians deployed two 20 mm machine guns [rather, machine guns] on either side. The next visible defensive post, and another 200 m away, was behind the guns. The terrain in between was probably mined. Immediately behind, the railway line made a sharp left turn in the direction of Dyhernfurth [Brzeg Dolny]. At this point, a supply line branched off that led directly to the factory. It was a very good way of being found in the dark by people unfamiliar with the area. Much depended on a quiet and swift elimination of the Russian garrison of both rifles […] The youngest general in the German army [Sachsenheimer], who was greatly appreciated and respected by the soldiers, and with whom he often endured·the rigors of the Puÿawy January offensive until after Breslau had endured, after suicidal infantry assaults against the incessant attacks of Russian tanks, came near the Oder and the Breslau fortress to take command of the Glogau [Gÿogów] fortress, which was several tens of kilometers away from Dyhernfurth . At 3.

On February 2, Colonel Knüppel, the chief of staff of the 4th Panzer Army, summoned the general to a meeting at headquarters in Lubaÿ (Lauban). The surprise attack on the Brzeg factory should definitely be completed successfully. The colonel gave him all the known details and ordered the planning of operations to begin immediately, handing over the following written order: 'Form a raiding party to carry out a surprise attack on the chemical plant at Dyhernfurth. The purpose of the operation is to offer a chemical warfare officer, civilian volunteers, two scientists and 18 workers at this factory the opportunity to destroy the secret poison gas stored there. These liquid substances were located behind the enemy front in underground tanks. Engineers suggested pumping the substance into the Oder, which should be easy to do using factory pumps and equipment. Furthermore, the

Army Group ordered the leftover chemicals to be rendered unidentifiable. Blowing up the tanks is neither practical nor advisable. It may have consequences for the personnel involved in the surprise attack, and there may be a large enough amount of substance left over for the enemy to analyze later. After that, the storm troop was to destroy all the remaining material and the nine storage bunkers using explosives. The amount of substances left behind could be too large for later evacuation.' Meanwhile, the General

Command selected appropriate units needed to carry out the operation. When they were near the railway bridge, they immediately returned to their starting position. The General Command also promised additional units and special weapons. Two paratrooper companies, two 88 mm gun batteries and an engineer company with 81 assault boats were to take part in the surprise attack. The general was aware that the mission had to succeed, although he feared one thing: he didn't know the units he was commanding at all. He was also concerned about the presence of civilians who were inappropriate for such an operation. He could only pray that the Russians occupying the castle across the river stayed drunk for as long as possible. He reconsidered his decisions and, without waiting for reports, approached the 4th Panzer Army Command with a new idea. The command center accepted his plans and it was agreed not to drop paratroopers from the air, but to bring them closer to the starting area as a reserve. This message was telegraphed to headquarters by the AOK-4 staff. Major Joos and his landing party swam under the bridge in complete silence and under cover of darkness, silently liquidating the Russian machine gun positions. They managed to avoid the mines on both sides of the bridge and then ran as a squad along the crest of the railway embankment, only to immediately attack the next Russian position. The Russians were taken completely by surprise and surrendered without a word. 65 min from the

During the attack, the factory technicians and chemical weapons experts worked to start up the generators and factory pumps.

The work went faster than expected. Sounds of scattered fighting could be heard around the factory. Only at 1 p.m. did the Russians find out why they were pressing the Germans so doggedly here. A moment later they launched a concentrated counterattack. From Seifersdorf, 18 tanks (a few T-34s, mostly T-52s) formed into a wedge in the shape of the letter 'V' from the north. The general decided he didn't have enough time to move the anti-tank guns from across the river, so he stationed two Hetzer on the bank, who immediately began shelling the Russian tanks. The returning German outposts brought the masked blockade units [anti-tank sub-units] information about the attacking tanks and set new targets for them. The tank destroyer command distributed itself accordingly for use. All tank destroyers were volunteers, which the army always lacked. They were entitled to a week's vacation for a destroyed tank. The effectiveness of the tank destroyers was considerable by the end of the war. Using specially developed methods, the majority of them were able to destroy many tanks in a single collision. This time, after a short time, after the tank attack, the terrain turned into a burning and smoking landscape occupied by both sides. All vehicles came to a standstill. Before evening fell, a further seven tanks appeared from Kranz and continuously fired on the railway embankment leading to the factory. On

Victory by the Russians would have meant the operation had failed and the retreat path would have been cut off for all units involved in the operation. The Russians finally figured out what was going on and what had to be done to prevent the factories from being destroyed. Exactly for this case, the 88 mm guns were placed near the bridge. The tubes rose above the river dikes and quickly destroyed almost all tanks firing at the embankment, throwing them to a preset distance of 500-700 m

continuously fired at. Only one turned and fled towards the safe tree line.

This short, extraordinarily effective shelling completely paralyzed the Russians, who refrained from all further attacks. Gradually the fighting around the factory died down, dead soldiers lay everywhere and tanks burned in the winter twilight. The participants in the surprise attack prepared to retreat, taking with them the equipment, the wounded and a few dead comrades. The operation would have been a complete success had it not been for an accident at the factory. Engineers were preparing explosive charges when a pressure vessel containing gas residue burst, splashing several soldiers and civilians, blinding them instantly. Headquarters kept in direct contact with the people working in the factory all the time! Marshal Schörner personally requested that General Sachsenheimer come to the microphone. Surely he wanted to wish him success or remind him of the importance of the operation. The general, meanwhile, ignored the order and oversaw the progress of the operation with two scientists. He then asked an aide to sit behind a typewriter and write a report that all the gas, including important material and documents, had been duly 'secured'. This document was signed by two professors involved in the operation. […] The paratroopers promised by the command post never came, not even as a reserve. The Russians, seething with rage, set fire to Dyhernfurth Castle and the surrounding church buildings, which housed an invaluable library."

That was in February 1945, when the Third Reich was already doomed. However, let's go back to the "climax" of the preparation phase for chemical warfare. The number of devices that were clamped into this top-secret wheelwork testifies to its hitherto unknown extent. The information presented on the following pages comes from the detailed US intelligence report already cited and has largely never been seen before

this. 26 report to Eisenhower again, moreover, published in the introduction to

"Investigation results, point 6: The production of poisonous gases is running at full speed and is decentralized."

And:

"Findings, Item 3: Preparations for the use (both defensive and offensive) of chemical weapons are very advanced."

Let's start with a list of places, or rather an addition to the known information so far:

Garmisch-Partenkirchen

Chemical preparations related to the flying bomb were carried out by the chemical works in the named place.

(Source: Allied Governments, London, #2036. 29.07.1944. p.)

Gelsenkirchen

Around the turn of the year 1943/44 it was determined that there was a launch pad for unmanned aircraft there.

(Source: Allied Governments, London, #2036, 07/29/1944. p.)

It was previously reported that some gas was being produced in the factory between Gelsenkirchen and Essen.

(Source: Allied Governments, London, #1501. 04/18/1944.)

The message below does not have to be directly related to chemical weapons, but to their delivery systems: Munich - Bayerische Motoren Werke,

Plant No. 1.

The plant manufactured 400 engines a month, with the total production in the German Reich amounting to about 12,000 pieces a year. […] Tests of a new engine with an output of 35,000 hp are carried out. Dubbed the BMW-806, it will be used to power a 'super plane' that will approach the US coast and drop a robotic bomb. […] The BMW plant no. 1 was completely destroyed, production was shut down

Plant No. 2 relocated to Munich-Allach.

(Source: a telegram from Stockholm to the State Department. 09/02/1944. Johnson, Minister. p.)

Tilleur (Belgium) - Angleur Athus Works

Located on the left bank of the river Meuse at Tilleur, these works were taken over by the Germans. They became an important facility for the production of liquid air. The facilities are located above and below ground, extend for approximately 1km and are located between the bridges at Seraing and Ougree - starting approximately 750m east of the Seraing Bridge.

(Source: OSS, SO-1257. 08/02/1944. Classification: B-2, p.)

These works deal with the filling of bombs with toxic gases or with liquid air.

(Source: OSS, SR-796 February 1944. A credible Belgian source, C.)

Tannwald (Czechoslovakia) – a particularly important message from the point of view of the further chapters!

Parts for the German secret weapon are manufactured in Tannwald. The exact location of the company has not yet been determined. The weapon, designated V3 [?], is said to be an aerial torpedo that sprays an incendiary substance. The sprayer is manufactured by the Skoda works in Pilsen.

(Source: Allied Governments, Report No. 2232. 08/18/1944. Classification: C-3. Czechoslovak Intelligence Service. p.)

Commentary: It is quite likely that this was actually a rocket (maybe the V2, it was often called an *air torpedo),* while there is something behind the "sprayer", which would not make much sense in the case of a large rocket what the military calls a "chemical weapons distribution facility." This is important because the connection between the facility in Pilsen and strategic weapons is known from other sources! Again it is about an SS facility.

If the mention of previously unknown research in nearby Czechoslovakia should have piqued anyone's curiosity,

So I have good news: most of this book is devoted to precisely this forgotten aspect of war. Czechoslovakia was linked in a special way to the development of German strategic weapons, and chemical weapons were probably the most important component!

Antwerp (Belgium)

On June 17, 1944, the garrison in Anvers received new gas masks. The respirator filter is constructed as follows: anti-arsenic paper filter [?], 2mm layers tightly pleated; metal disc; three in layers of activated carbon [?] discs [?] 20, 20 and 18mm

(Source: Allied Governments, Report No. 1931. 07/20/1944, from a Bulletin of the Belgian Military Intelligence Service No. 203.)

Berlin / Dahlem – Kaiser Wilhelm Institute

This institute continuously conducts research in all areas of physics, chemistry and related sciences, is largely independent and is headed by Prof. Planck. It is made up of many departments, some of which are secret and under special protection. According to a German prisoner of war, one department is undoubtedly responsible for chemical weapons. The institute is very scattered with numerous facilities and laboratories, however the prisoner of war could not pinpoint the exact locations

to name.

(Source: Report of the Military Attaché in London, No. 70675. 07/21/1944. interrogation of the prisoner of war, p.)

Brno (Czechoslovakia) – Waffen Union Brno

This plant received a letter from Germany about the possibilities of manufacturing guided missiles filled with gas.

(Source: Report of the Military Attaché. Allied Governments, No. 1995. 07/27/1944.)

Cakovica (Czechoslovakia)

Manufactures fuselages for the Arado-96B and assembles engines. From the beginning of 1944 to March, 8,000 funnel-shaped cases were made

produced. They have a square base measuring 50 by 50 cm and a top with an opening 50 cm from the base. They were built to withstand a pressure of 40 atm and are thought to be used to release gases or liquids. Employees: 5,000 – 6,000 workers.

(Source: OSS #2297, July 19, 1944: 'The armaments industry in the Prague area'. The information is dated at the end of March 1944. credibility unknown.)

Czechoslovakia

The information indicates that war gas was being transported via the Vienna – Moravská Ostrava railway line. Instructions have been issued on protective measures, according to which the danger zone in the event of an explosion will be 2-3 km upwind and 20 km downwind.

(Source: Allied Governments, No. 2089. 05.08.1944. C. Classification: C-3.)

Dÿÿín / Tetschen-Bodenbach (Czechoslovakia)

Large war gas factories are located there.

(Source: S&I Div. 4 SC PFI-2. 03/01/1944.)

Fürstenberg [near Gubin / Guben]

In this city (52° 07' N. – 14° 40' E) there is a gas factory that carries out an intensive production program.

(Source: report from CP&M Br. BX-94. 08/24/1944. The information comes from a source that is classified as very credible and is located in the territory occupied by the enemy. It covers the period from 04/13 to 07/30 .1944.)

Hamburg, Germany)

Preparations for a chemical war. Prof. Keeser from the Institute of Pharmacology at the University of Hamburg has prepared a new circular on defensive measures in the event of chemical warfare, which all Doctors have received.
It contains lewisite, a yellow ring agent, phosgene, a

Yellow cross remedies and nitrogen mustards [?] mentioned.

(Source: OSS, undated. Report RB-18121.)

High Pyrenees

Poison gas is reported to be produced in this region. Efforts are therefore being made to obtain more information.

(Source: Overview of the intelligence reports on chemical weapons, report no. 7. 06/20/1944.)

Kolín (Czechoslovakia)

There are factories that produce sodium cyanide (used as a raw material for the production of poisonous gases). The director of the nearby potassium works in Kolín is German.

(Source: FS / S&ID 6SC. Report No. 1675. 29.07.1944. p.)

Landsberg

On the premises of the local operations there is a laboratory where all kinds of infectious microorganisms are studied and cultivated in order to load V2 warheads.

(Source: OSS. SO-1524. 08/12/1944. British source.)

This message may have been included in the chemical weapons report just by accident, but it is extremely interesting. It reminds me of a story once told by the tireless researcher Kordaczuk from the Regional Museum in Siedlce - he is dealing with places where test impacts of V1 and V2 shells fired from the Blizna region took place in the Siedlce area became. Some time ago he asked me questions on the following topic: Numerous craters in the field, which were formed as a result of rocket impacts, had a diameter of up to several tens of meters, usually filled with water after some time and formed artificial ponds. In this unusual way, the farmers were able to obtain drinking troughs for the cattle, which were scattered all over the area. However, in the years immediately after the war, a strange epidemic swept over one place, killing large herds of cattle. A veterinary inspection arrived and began checking sources of drinking water for animals. Also a sample from a

round "pond" was taken. As a result, it turned out that it was filled with a suspension of anthrax germs! It will be interesting to see if there was also a chemical version of the V2 warhead - there is no doubt that such warheads were made for the V1.

Marpingen

The chemical works in Marpingen produce war gases.

(Source: OSS, RB-17949. 08/21/1944. C-3, C.)

Munich-Allach

The BMW plant no. 1 was completely destroyed, production was moved to plant no. 2 in Munich - Allach. Experiments are being carried out there with an unknown type of poison gas.

(Source: Stockholm to the State Department. 09/02/1944. Johnson, Minister. S.)

Comment: An interesting connection! It's the same work that was mentioned in the context of an unspecified strategic cruise missile that the Germans planned to use to attack the United States! And as for the "unknown type of poison gas": tabun and sarin were not known to the Allies at the time.

Neuberg (Germany)

There is a special training ground in Neuberg where infantry reservists are trained under conditions prevailing during chemical warfare. Mustard gas and 'white cross' are used. The antidote to the latter is Losantinoasta.

'White Cross' dries up plants - they become white.

(Source: OSS, undated. Org. Report RB-18121.)

Pardubice / Pardubice (Czechoslovakia)

war gas factory.

(Source: S'I Div. 4 SC. PFI-2. 03/01/1944.)

Pieve Vergonte (Italy)

The 'Rumianca' factory in Pieve Vergonte (D-5729) produces large quantities of poisonous gases. It is a type of liquid

FT evaporating in open air.

(Source: OSS. 08/21/1944. Original report: J-2193. Classification: B 3.)

Radebeul – Heyden

Company A representative (P. Prosch junior) found out in November 1938 that the company was producing war gases day and night. The gas is so strong and penetrating that it renders the gas masks used in all countries completely useless.

The Heyden company used to manufacture chemicals and pharmaceuticals for general use.

(Source: 9SC. No. 280. 08/31/1944.)

Vilbel (near Frankfurt am Main)

In 'Jilbel' (probably Vilbel) there is a large chemical factory which is said to produce medicinal products. In reality, however, it only supplies war gases. There is only one factory there, so an error can easily be excluded.

(Source: OSS. SO-1524. 08/12/1944. British source.)

Zámky (Czechoslovakia) – pyrotechnical and ammunition factory Ing. F. Janecek Ltd.

This company, whose capital is 200,000 crowns, owns an ammunition plant in Prague and a factory for pyrotechnic substances on the outskirts of Zámky. It was formerly involved in the production of rockets, fireworks and signaling devices for the military.
It is suspected that explosives are stored on their premises. The factory is in a valley above Vltava [Vitava, several tens of kilometers from Pilsen], hidden among hills. All that can be seen from the air is a row of single-storey wooden buildings. The source emphasizes that it is one of the largest gas mask manufacturers in all of Czechoslovakia, which in terms of production volume cannot compete with only the Bata plants in Zlín.

(Source: P. Albert Klauber, Speedry Products Corp. 19 Rector Street NY. Chemical engineer and Czechoslovak citizen. NY MID

12488. 01/14/1944.)

Zlín (Czechoslovakia) - the Bata company

Building No. 34 produces end pieces for poison gas throwers [the text is unclear and certainly contains an error: 'muzzle attachments for gas bomb throwers' - it suggests that these are distribution systems for aircraft, although it is clear from the wider context that mobile launchers are involved]. The gas tank is carried on the back. The compressed gas is ejected at a distance of 50 m [!] and has a dispersal arc of 28 m [again an ambiguous wording: "dispersal arc of 28 m"].

The gas cannot be blown back by the wind as it is ejected in a swirl [see the Swirl Weapons chapter]. The gas type could not be determined.

(Source: OSS. A-31218. 06/01/1944. Czech source, London.)

Vorarlberg (Austria)

At the end of September [1944] five plants in Vorarlberg received an order for half a million gas masks. That is five times their monthly production. It is believed that gas masks are only available for 10 percent of the German population.

(Source: The military attaché in Bern. No. 1736. 09.09.1944.)

Original quotes from reports from the Allied intelligence service. They reveal the hitherto unknown extent of German preparations, evidently feverish, for chemical warfare. (NARA)

Karlsruhe

Preparations for a possible use of Lewisite are ongoing [by the other side]. Eight hundred party members were arrested on March 3. September 1944 gathered on a special instruction course in Karlsruhe.

(Source: The military attaché in Bern. No. 1736. 09.09.1944.)

The other messages contained in the report no longer describe specific locations, but the entirety of the preparations for chemical warfare - they are considerably more interesting! [26]

British radio monitored by *NBC* has reported that Polish patriots have begun reporting the use of 'gas grenades' by the Germans during fighting in the Polish capital. [Comment: Indeed, SS units threw such grenades into the canals through which the insurgents escaped from the encircled city regions. The type of gas is unknown.]

(Source: AP, London. 08/30/1944.)

The production of gas masks currently has the highest possible priority in Germany, although it has only taken third place so far. This information comes directly from an official at a plant that supplies masks. He added that his plant has increased production by 100 percent over the past year. [Comment: This is strong evidence that feverish preparations for a chemical offensive were indeed being made

were hit, as Speer claimed. One of the other reports contains even more shocking numbers!].

(Source: OSS. RB-18014 (pt. 08/22/1944.)

Hans Lazar, the press attaché at the German embassy in Madrid, has claimed that the Third Reich could be defeated but will do everything to ensure that enemies both internal and external pay the highest possible price, including the consequences of chemical warfare.

(Source: a telegram from Madrid to the State Department - 08/30/1944. Ambassador Hayes.)

Shortage of gas masks confirmed. The NJ breathing masks manufactured by the NS women's organizations are currently being handed over.

(Source: Bern to the State Department. No. 5778. 02.09.1944.)

A brochure entitled 'Warfare Worksheet for Doctors' has been sent to all German doctors in the past few days. It describes first-aid measures - injuries caused by phosgene acetate, lewisite, 'loste' and 'yellow ring agent' [ie substances that were available to the Allies] are discussed. All local communities larger than a certain size are to practice 'passive defense' in case of attack; mass production of gas masks was ordered.

(Source: Minister Johnson. Stockholm to the State Department. 09/02/1944. p.)

According to Italian business circles, officials from Germany's Reich Ministry of Armaments and War Production have visited several chemical factories still operating in northern Italy and placed top-secret orders.

Informants who provided this information spoke of German preparations for chemical warfare.

(Source: Telegram – Bern to the State Department. No. 5771. 02.09.1944.)

On August 25, *Libera Stampa* reported that the Germans placed a large order for chlorine and activated carbon with Italian industry, which is preparing for large-scale production

a chemical war and the production of gas filters.

(Source: Telegram – Bern to the State Department, No. 5592. 08/26/1944.)

The Turkish security service cites an editor of *Vakit* magazine who wrote that the Germans will make every effort to protect their borders. Various types of gases [chemical weapons] and other means of destruction are expected to be used as the German war system reaches this new stage.

(Source: FCC - Daily Report. 07/10-13/1944.)

The state leadership has ordered all citizens of the German Reich to take part in mandatory lectures on appropriate behavior in the event of gas attacks. These lectures are to be given by district chemists in all cities in southern Germany - reports from the German border were disclosed on August 11th.

(Source: *NY Times,* August 12, 1944. Bern / Switzerland.)

The Germans provide all factories and other workers with gas masks. Mysterious boxes, the contents of which are clearly linked to chemical weapons, are sent to the front lines. According to earlier reports, German industry is working to fill an order for 60 million gas masks as quickly as possible. By July 25, the entire population of the German Reich was to be provided with them, but various problems delayed the implementation of this program.

(Source: Zurich, telex. 08/17/1944.)

A previously credible informant heard from the director of the chemical industry that negative reports had arrived from IG Farben and other chemical companies about the chemical war to come. Although certain results have been obtained with hydrogen cyanide, the Germans are unable to produce a more effective gas. It is not possible to start mass production of complicated valves and tanks. The experiments with microbes also ended in fiasco. [This is one

blatant and intentional misinformation intended to lull enemy vigilance and divert attention from facilities related to the preparations, which could have been targets of eventual air strikes! Not only did the Germans cope with the mass production of tabun and sarin without any problems, they also had sufficient stocks of these agents in the fall of 1944 to be able to deliver the decisive push to the Allies - there was only a bottleneck when it came to the availability of strategic delivery systems! The production of containers or valves was also no problem at all! Incidentally, hydrogen cyanide was never even considered as a potential chemical weapon—there was simply no need for it.]

(Source: OWI – official telegram. Embassy of the USA in Bern. 06/29/1944.)

According to information from the Balkan Mountains, the Germans are transporting large quantities of war gases from the German Reich to Hungary to be used against the Soviet Army, fearing with horror a new massive offensive. Attention is drawn to an official document of the German Reich - on June 2, detailed instructions on the transport and handling of war gases were published.

(Source: FCCL, *Radio France,* Algiers. 6 / 20-506A.)

The prevailing view in Britain is that gas will only be used in this war if [in the German Reich] the desperate Nazi faction gain the upper hand, determined to retain power and resist to the bitter end.

(Source: *AP,* London, 08/31)

The *Daily Mail* 's Geneva correspondent today cited reports 'circulating in the German Empire and neutral states' that the Germans are planning a chemical offensive as a final means of defence.

(Source: *AP,* London. 08/30/1944.)

In March 1944, a unit that included a prisoner of war

Instructions on the new 'Schwarzkreuz' gas [probably tabun]. It is colorless and odorless. The gas penetrates the respirator filters of older masks, new gas masks have been issued.

(Source: Department for prisoners of war. No. 1318. 05.09.1944.)

According to the underground, the Luftwaffe will appear over the German capital within about two weeks. This is roughly the same time period given as the beginning of chemical warfare in the west [so the Allies already knew the exact date!]. A well-known clothing designer and producer [of the company?] Kleiner, who recently visited Stockholm, wrote information similar to the above.

(Source: OWI, Stockholm USINFO. 09/02/1944.)

According to Norwegian intelligence, the Germans' next secret weapon is said to be a robotic bomb [a cruise missile?] loaded with chemical weapons.

Recently, there has been a sharp increase in the production of gas masks in Germany, and the population is being prepared for chemical warfare.

(Source: Moscow, No. 3614. 09/12/1944. Minister Johnson.)

[Brief comment by the author: This evokes associations with the work of the BMW group in Munich described above.]

Everything I have presented above in the form of raw information from unaltered primary sources makes a largely authentic impression. After all, it is an enormous number of different reports from various sources. Compared to school books, they all give a very different picture of what was happening behind the scenes in the second half of 1944. It is clear to see that the world was only one step away from a monstrous chemical apocalypse that would in all likelihood have wiped out entire cities. An example: "Only" 100 t Tabun (in a hypothetical attack on a large city, which accounted for less than one percent of the total stocks) corresponds to about the

a billion fatal doses and about a hundred billion paralyzing doses that lead to blindness.

There are still very few historians who are aware of the extent of German preparations in this area and their special priority. After all, tens of millions of gas masks were being made at a time when rubber was such a deficient material that rubber was even brought in from East Asia by submarine! Undoubtedly the casualties of this even more total phase of the war would have numbered in the millions! In all likelihood, it was not problems with the chemical weapons per se that led to the change in decisions, but the inability to deliver them safely and with some degree of reliability to the enemy's rear - the lack of a strategic arsenal that would have allowed one to be deployed perform a concentrated attack against a variety of targets. Work in this area has been delayed. The plans mentioned had to be long-term goals, since otherwise the existing carrier systems would have been sufficient to initiate this phase - e.g. B. the V2 rockets. This reminds me of a statement by Prof. Moÿdawa, who once overheard a conversation in the Gross-Rosen Technical Office in which (in the context discussed here) the following words were uttered: "London, Moscow, New York...". Back then, in the second half of 1944, the leaders of the Third Reich came to the conclusion that this was the only way to bring the enemy to their knees. I have to admit that even from today's perspective, this view seems justified.

It also reminds me of the transfer, mentioned in the first volume, of German agents to the USA in 1944 who were equipped with remote control transmitters. In the context of preparations for a strategic offensive (ie also against the USA), I encountered the argument that the Third Reich did not have remote control systems for weapons with such a range. However, this argument is not particularly accurate. An inertial navigation system z. B. used on the warhead of the V2 rocket, could carry an "object" with a deviation of several tens of kilometers. A receiver, on the other hand, could have taken over precise remote control on the final leg of the flight without any problems. He could be picking up signals from a ground transmitter left in the center of town by an agent

would have been. There were warheads that could lock on to a ship's radar signal from over 100 km away. It is worth keeping this section in mind when reading the description below about Pilsen, where work on an advanced drive for German strategic weapons was coordinated!

However, this is not all new information about the Third Reich's preparations for unleashing chemical warfare!

As already mentioned, the strategic delivery systems were the decisive but not the only factor. Weapons with which attacks could have been carried out on a tactical scale also had to be taken into account. After the publication of the first volume of the English edition of the "Truth About the Wonder Weapon" (in November 2003) I was hoping for an echo from the readers there, for information that could help solve some of the mysteries connected with secret weapons of the Third Reich. This echo was not very large, but I still got some interesting signals.

The most important of these concerns the preparations for chemical warfare - the construction of missiles to be fired by submarines.

I have exchanged letters with a Brit whose military father got on this trail in 1945! His name is Keith Sanders and during our long correspondence he described a rather unusual story that happened to his father. I would like to take this opportunity to sincerely thank him for sharing valuable information with me. I hope that this publication will help him to clarify the facts presented. In 1945 his father is said to have ended up in a secret underground factory in Espelkamp in north-west Germany, which was under SS control. He referred to them as MUNA, which is simply short for "munitions facility." There the Germans dealt with the filling of the *fire lily* rockets with poisonous weapons, specifically with Tabun! The rockets were completely unlike the known experimental versions, which were described in Volume II of "The Truth About the Wonder Weapon", among other things. They had solid propellant engines because they were designed to be fired from submarines against ground targets. It is not possible to verify the authenticity of this story

to be reviewed today, partly because of the amazingly large problems in obtaining documents on this subject. In my subjective opinion, however, it is a true story; in any case, Mr. Sanders makes a serious and responsible impression.
I just want readers to make up their own minds about it.
After all, until recently the whole complex of questions surrounding the preparations for this “super-total” phase of the war was shrouded in such a veil of mystery that such unanswered questions should come as no surprise. On the other hand - as already mentioned - the production of the toxins themselves must have been accompanied by work on delivery systems as well as an operation planning - about which we still know surprisingly little (nevertheless I tried to refer to this in the further part of this publication answer at least some of the questions). As for Mr. Sanders' story, it will be best if I let him speak for himself, quoting excerpts from his descriptions: (02/21/2006)

> “[…] I have known this story since the summer of 1952. My father died just a few months later, he had been suffering for four years due to poor health. Worse was to come - our district doctor was a communist and one of the leaders of the resistance movement in the mining valleys of North Wales. We had switched doctors about 18 months before my father's untimely death when he was 46. I was two months into my five-year apprenticeship as an aircraft technician with Gloster Aircraft Company when I was called home.
>
> After demobilization in 1946, my father returned to his pre-war job as a railway official. The Great Western Railway enabled him to take up work as a freshman with a six month preparatory period, although he had joined the railway in 1923. The head of the company was used to spending his holidays at party congresses in Nuremberg before the war!
>
> Christmas 1940 – in the euphoria of the Battle of Britain, my father joined the RAF as a navigator. However, he was soon informed that he had taken on a reserved role and it

would be a pity if he wasted his time, especially during the war! In August 1941 he was called up for service in the Royal Artillery, where he was sent to an artillery tractor driver's course at the same school his step-brother attended. However, in 1943 the Army concluded that it had sufficient artillerymen for the war and my father was posted to the Royal Army Ordnance Corps (RAOC). Here he was trained as a munitions technician (technical officer) and eventually promoted to corporal.

He was assigned to 12 Base Ammunition Depot (BAD) and was involved in building ammunition depots in Sherwood Forest associated with Robin Hood. In 1944 the Germans launched a small air offensive against Great Britain. One RAOC corporal on duty at HQ was killed in one of the air raids on the Tilbury dock area. That was on February 14, Valentine's Day [...]. Someone was needed to fill his role, so my father was sent to Liverpool for retraining to load ships with ammunition. One of the ships he worked on was the 'Robert S. Montgomery' - a Liberty freighter that still rests in the Thames Estuary. […]

On June 29, 1944, the 12 BAD was sent to Normandy, with my father's section being transferred to Flixecourt-sur-Somme. There she was to deal with a V1 bearing that had been discovered in a factory on the premises of a village. This work could not be completed until 1945, after which he joined most of his colleagues from the RAOC force in Tamise, Belgium. There he waited for the 21st Army Group to cross the Rhine.

The troop commander at Tamise received urgent orders to assemble a mobile volunteer group of munitions technicians to accompany the 11th Armored Division's troops on their way. The army was constantly short of drivers, especially in the rear units. Commanding Colonel Pritchard assigned Captain Tucker (he became Aug

Awarded the DSO Order of Merit in 1945 and in 2000, when he was already a major, I managed to find him; he confirmed my version of events in every detail). The mission could only come about if Corporal Sanders volunteered for it - this event later led my father to keep trying to persuade me that I should never volunteer for anything, never in my life!

Mobilgruppe No. 1 crossed the Rhine on March 24, 1944, just behind the tanks and support vehicles. They advanced in this order until they reached Boomte at 8 a.m. on April 4. There, on a square, the issuing of orders took place. Major Bill Close of the 3rd Armored Regiment taught my father principles of how to move in a column of armored vehicles tasked with securing the lighter armored vehicles (which is documented in the Journal of Combat Operations). Bill Close confirmed this during a 1998 luncheon hosted for division veterans.

The column headed towards Espelkamp, choosing the southern route through Levern. This village was protected by about two thousand SS men, and the fight lasted almost a week. The SS expanded their positions along the way to stop the advance of the British troops. The 'Comet' tanks, along with four trucks (three of them carrying infantry who could not ride on the tanks), chose a side road about a kilometer south of the town. Therefore, the route to Fabbensett was almost entirely open to them, apart from the bazooka-armed suicide squads.

At the next crossing there were already significantly more SS troops who were all entrenched. They directly protected access to MUNA. This group of about 50-60 SS men (the number is an estimate) was incapacitated by the Typhoons with cluster bombs. […]

My father parked by the factory watchtower [in Espelkamp] and watched the situation develop. A large number of starving

Soviet prisoner of war, interrogations and the search for a missing German general all contributed to a slightly agitated mood. The general's flag was still flying from one of the five vehicles parked at the front gate. One of the Russian POWs spoke English and made a remark. My father has already forgotten its [exact] meaning, but it was about why the German atomic bomb didn't work.

That was on Wednesday, April 4, 1945, at 3:10 p.m. - when it was revealed that the RAOC troops were to receive the antidote shots dubbed 'Deadly Nightshades', which the German scientists present were pleading for. My father refused - he preferred to rely on German means. My research shows that these injections did not help my father's colleagues for the next few years either. I couldn't find anyone who would have survived that. My father remarked that none of the officers crossed the threshold of the chemical weapons factory, which manufactured chemicals that paralyzed the nervous system. It can be assumed that both Major Tucker and First Lieutenant Draper survived the war. As for the latter, I was able to ascertain that he had lived only eight miles from me in Maidenhead. When I tried to reach him in 2000, I found out that he was in a mental home and I wasn't even allowed to see him [there is a possibility that the brain damage was caused by tabun]. Eventually it turned out that the squad was dealing with two platoons of 'Tiger Lily' rockets that had already been half filled.

On Sunday, April 8th, my father saw more bills of lading. They concerned three trains that had been dispatched in March. The last, number 0126, departed on the sixth day of this month. This discovery was later to cause a hell of a stir. This went so far that I was denied access to my father's service history files 'under any circumstances'. It is standard practice for service history files to be the next

Be made available to family members after 20 years.
It would take entire chapters to describe their scandalous attempt to cover up anything to do with my father's travels.

There is a lot of detailed information about the MUNA. As with an iceberg, only the tip can be seen here. The uranium reactor was buried deep in the earth and masked with wood giving the appearance of a construction site, the rest of the work was hollowed out in a china clay deposit. Originally this deposit was part of the resources of a company owned by the Rosental family. As a Jewish company, however, it became the property of the SS. The earth was turned to mud and disposed of via a pipeline in the Midland Canal. From there it was transported away by barges and trains, which can be seen on aerial photographs. The amount mined by the forced laborers appears to have been huge.
The pipeline dimensions suggest that a flow rate of 1,300 tph was achievable. […]" This description leads to some reflections. One of them is quite unexpected and stems from the fate of both the father himself and some of his war buddies. The report indicates that since they had no vision problems and continued to take part in the war, they were certainly ingesting low doses. Yet many of them died within a few years of these events! This is interesting (if such nightmarish occurrences can even be called "interesting") in that only short-term exposure to toxic warfare agents is usually investigated. This time we have data on the long-term effects of small, if not minuscule, doses. The German scientists mentioned were probably the only ones who were aware of this in Espelkamp - certainly not without reason they craved injections so feverishly, although the author mentions no visible symptoms in his report. I could well imagine the following scenario: If e.g.

For example, if rockets or other projectiles transported several tons of tabun over any city, then there would certainly be a certain number of people who would be killed on the spot. A lot more people

would be more or less affected by the effects; they would surely be wandering blind by the thousands, as in the science fiction novel The Triffids that was popular many years ago, or lie semi-paralyzed in their basements. However, many apparently healthy people would certainly have been evacuated after a certain time. However, as the above report suggests, within a few years these people would also develop serious health problems and would be lost (to a greater extent than one might initially believe) to the state as the "human rear of war". Perhaps there would also be an epidemic of mental illnesses - after all, the substances in question damage the nervous system at the molecular level. In any case, the extent of the destruction would be very different from all previously known scenarios.

The second point is the question of the possible existence of a "uranium reactor" in Espelkamp. Recent investigations by a German research group led by Jörg Finkemeyer, who lives in this region, have not been able to detect increased radiation.
However, this part of the statement could also be a misunderstanding based on rumors circulating among the Germans themselves or among the forced laborers. However, it is also possible that the construction of the reactor had only recently started and the place therefore looked like a construction site. I suspect that this riddle will no longer be able to be solved.

Keith Sanders also described his "post-war adventures" with the mentioned missiles, or rather trying to solve the mystery of the previously unknown chemical version (water-to-ground class):

(03/03/2006)

“In 1957 I was at the College of Aeronautics at Cranfield in Bedfordshire to take the entrance exam and interview. After the exam we were allowed to look around the site, there was a wonderful museum there, which served as a teaching tool during the course. The facility was originally established and administered by the Ministry of Supply.
It contained an unbelievable amount of different captured equipment - rockets and planes. I had a 35mm camera with me and took pictures to my eternal shame

all sorts of planes, but not a single rocket!

The 'Fire Lily' was displayed on a float at chest height. This enabled me to touch the bullet and look closely at two 'corks' which appeared to be made of stainless steel. They looked like today's gas caps for Porsche vehicles. It was only later that I realized that it was silver, not stainless steel, that did not corrode on contact with the binary tabun.

Pulp with each other only after leaving the launch pad, which reduces the danger during transport and launch. It also eliminates an important problem associated with materials with reduced durability (although in the case of the German arsenal this was more the case for sarin and soman - less tabun). The missile can be transported with the warhead 'full', and the crew of recruits will have a harder time 'damaging' or getting killed on anything e.g. B. could be the case when filling in the field. Incidentally (or rather above all): Even the smallest problems with the tightness of a normal warhead could lead to a catastrophe on board a submarine, which cannot be ruled out with continuous changes in air pressure!].

When I was investigating this matter for the Military Tribunal in 1995, I contacted the Head of Aviation at Cranfield (now Cranfield University). He claimed that the 'Fire Lily' had been sent back to the Military College of Science, Shrivenham many years ago. He then assured me that it is currently in the Aviation Museum in Cosford. That is quite possible, but for me the rather primitive dummy of the 'Fire Lily' on display there only represents confirmation that something has been hidden. One must not forget the action taken by the Wilson administration in 1966, when all documents relating to this story were destroyed. Many sources have confirmed this to me.

By March 1945 the 'Feuerlilie' was available in the F-165 version, ie with a range of 165 km, equipped with a two-stage

> Solid propellant engine was equipped. After exiting the launch tube on board the submarine, the external auxiliary engines lifted the projectile to an altitude of 12 km and the wings allowed for quite a long flight. Then the engines of the second stage were fired, which, thanks to pulse operation, ensured a range of 160 km. After this, the warhead parachute was deployed and a barometric fuze initiated the explosion of the azide charge at a set altitude. [According to Mr. Sanders, the Germans came to believe that detonating a conventional explosive would destroy part of the Tabun charge and developed a special compound that gave off less heat.] […]
>
> The court-martial judge who finally awarded my mother's benefits in July 1998 wrote in his reasoning: 'It is very rare in history that an ordinary soldier exerts such an unusual influence on the outcome of a war.'"

There is another interesting lead in the material submitted by Keith Sanders. As an attachment to one of the letters he sent me a photocopy of a rather startling article published in the prestigious British newspaper *The Times .* It follows that in 1983 the wreck of a German submarine was found that differed from all known constructions! The author of the article suggests that this is a special "evacuation version" (what would it be doing on the US coast?), but in fact the description is more reminiscent of post-war ships that were ballistic missile carriers!

[35] Here are some excerpts:

> "This discovery of a previously unknown WWII German submarine resting pristine in Caribbean waters provides new impetus to the theory that Goering took delivery of nine U-boats to facilitate the evacuation of the highest-ranking officials of the Third Reich [In the case of work on what is commonly referred to as strategic weapons related to chemical weapons, there is a common, often repeated motive - the close cooperation between the SS and the Luftwaffe. The Luftwaffe, on the other hand, did not organize any strategic evacuations!].

This submarine, found by an American wreck researcher, has only a bronze plate inscribed 'Hamburg, Germany, removed in 1944'. There is no visible tactical number and the ship bears no resemblance to any known concept from the time of the last war.

The Imperial War Museum also has no information that a German submarine was sunk in the region where the wreck is located. After familiarizing themselves with the unit's sketches, library staff have confirmed that its silhouette is 'unusual'. The submarine was found by Roger Miklos (41). He runs the Florida-based company 'Nomad Salvage', which deals with the search for wrecks. Miklos has been scouring German museums for the last few months in search of any trace of this entity.

He said, 'At first I was only interested in mercury that was on board as ballast' [How did he know it was on board and why as ballast? There were much cheaper and less dangerous substances, and the submarines did not go on such dangerous journeys to transport ballast!]. However, after several dives and some research, he found out that the ship differs from the well-known combat types. Miklos claims that it is a Type VIIC unit that has undergone extensive modifications during the war. However, none [no known piece], according to the finder, has such large stabilizing fins and a conning tower placed well forward of the nave and connected to the bow by a long steel rod [certainly meaning the fishnet scraper]. The ship is 76 m long and weighs around 2,000 t. It rests at a depth of about 24m but is shielded by a coral reef that formed a sort of natural overhang under the hull. […] Miklos claims that it is preserved in excellent condition and does not even show any damage, partly due to the unusual properties of the local water, which does not cause rapid rusting. He is convinced that the submarine is still watertight and that the crew is inside

and 18 passengers [why 18?]. The torpedo tube flaps and conning tower hatches are still firmly latched and sonar inspection shows that there is still air inside. [...]"

This text doesn't explain much, but at least it shows that previously unknown secrets of the Second World War are still being discovered!

The latest source containing certain new information about the preparations of the Third Reich for the new phase of the war described here is a report by the British Intelligence Service on "Toxicology", ie the toxicity of the chemical arsenal. 36 It is based on the interrogations of several leading scientists in the field, but is not as interesting as one might think. The interrogated experts, who were presented with no evidence (the German operational plans and test results have not survived), carefully avoided mentioning their names in connection with what could be interpreted as another crime against humanity, since they themselves would have charged themselves with it. claimed to have had any dealings with phosphoric acid ester-based substances at all, and when asked about human testing they understandably [illegible] Nevertheless, it is worthwhile to cite a short version of the report, because it does contain some useful information: 36

"The main purpose of this BIOS reconnaissance was to interrogate Professor Ferdinand Flury, who works at the University's Department of Pharmacology Würzburg, and who was known to research the physiological effects of warfare gases and the general principles in the field of industrial toxicology and hygiene [The term "warfare gases" is of course not to be taken literally,

in fact almost none of these substances were under normal conditions in gaseous form!]. The latter subject was dealt with in a separate report, laid open to circulate in industrial circles [So it is clear that the Allies were simply concerned

the repetition of the German "success" went!].

In addition to Flury, the team also managed to get Dr. Wolfgang Wirth, the head of Group VII in Wa. 9 [the relevant research institute of the Wehrmacht] and the Sanitary Inspectorate, as well as the head of the Toxicological and Therapeutic Department of the Military Medical Academy in Berlin.

Flury's health was still poor and without his records he was unable to remember anything but the outline of his research [!]. He stated (which was later confirmed) that he had never experimented with gases that paralyzed the nervous system; his main interest was the preliminary investigation of substances that could be qualified as chemical weapons. The basis for this were contracts with the Army Weapons Office. Several weeks after the visit, his files were released for investigation; a list of compounds tested in his laboratory is attached. These connections, with the exception of 'Excelsior' [?], which was detailed in another report, turned out to be meaningless. In most cases, no attempt was made to determine the MLD [Mean Lethal Dose: a dose that causes death in 50 percent of the test organisms]. […]

Questions about human

experimentation As might be expected, none of the interrogated staff members admitted to having been directly or indirectly informed about human experimentation, apart from 'subjective experimentation', e.g. B. to determine the detection limit by smell and the like. […] With regard to the directly through the Wa. 9 groups, it seems relatively likely that MLD has not been identified in humans. It seems like the Wa. Check. 9 had, for strange reasons, been opposed to conducting such experiments, even in cases where the risk of death or serious injury was negligible. Example: There is evidence that people were not exposed to the effects of various irritants unprotected (see CIOS, Report XXVIII-50, page 34). For these reasons it was deemed necessary to carry out such work

Restricting organizations that were under 100 percent SS control. [A mechanism similar to that of chemical weapons was at work here - see Volume II. In effect, control of most of the potentially war-decisive arsenal of weapons of mass destruction was "forced upon" the SS - not because of any internal struggle or Himmler's intrigues, but because the Wehrmacht generals themselves wanted it that way! In this case, it is hardly surprising that it was the SS who became the main proponents of the use of such weapons, all the more so since they already controlled certain resources, which in this context were the concentration camps and the underground factories. And vice versa [illegible] chemical [illegible] key position [illegible] SS would become the decisive main actor! At least that was certainly the case with Speer.]

At the same time, there emerged a tendency in Professor Wirth to use diversionary and evasive maneuvers, which formed the basis for the suspicion that he knew more about it than he was willing to admit (certainly not unrelated to the Nuremberg trials). . However, as was ascertained during the operation, rumors of top-secret concepts were circulating even among senior personnel (Flury, for example, learned of the existence of the tabun, etc., at a time when he was definitely not entitled to such possessing information). Therefore, it seems extremely unlikely that someone who took a more central position was not even aware of rumors of chemical weapons experiments ending in death - which, it seems, was a fairly common practice.

For this reason we must carefully consider whether we should continue to put pressure on Professor Wirth to see if he can be 'encouraged' to recall further information which might even concern the location of the relevant documents - how it was otherwise the case. Alternatively, Dr. Interrogated Asal, Chief Physician and head of the Military Medical Academy

will.

Reports from earlier researchers gave the impression that Professor Richard Kuhn from Heidelberg might have some information on the subject. He occupied a senior consulting post connected with the party's research organizations and apparently acted as an adviser to Doctor [Professor] Osenberg. So he would probably have been in a position to provide information about SS research work in the territory of the German Reich. More than that, he was personally interested in problems related to chemical weapons and in 1944 he was involved in experiments on the influence of tabun, sarin, etc. on enzymes, which is how he came across soman. It must be remembered, however, that Kuhn's interrogation, which followed the interrogations described here, revealed no such information.

Research on Substances Affecting the Nervous System We have made some effort to trace the history of German work on these substances, partly in the hope that this might uncover any theoretical considerations that served as a basis. Partly also to find out whether substances that have a paralyzing effect on the nervous system have been tested in humans.

The interrogators revealed very little (it is about leads that previous investigators had not followed, and which therefore could not be described in previous reports). Sobering was the fact - although to be expected - that none of the interrogators had anything to say about the theoretical nature of the components that determined the pharmacological mode of action of these substances. In particular, Schrader [who is credited with discovering Tabun] concluded that, at this stage, there is no authoritative basis for formulating a theory that would make it possible to foresee the potency of the new substances, or the nature of that effect at all determine.

He proudly pointed out that his method is simply based on synthesizing all possible variants of the original ones

chemical compound was based. In doing so, he discarded any substances that proved ineffective or required carriers that probably could not have been manufactured in industrial quantities [a carrier is an additive that facilitates absorption]. This was a tedious procedure, requiring around 600 previously mostly unknown syntheses, although it must be noted that it paid off in full. […]

It is clear that the original decision to make Tabun the standard poison agent was made in the summer of 1939. At that time, the IG Farben concern received an inquiry about the possibility of building a production line that could have delivered a thousand tons a month. Such estimates were made orally at a September 1939 meeting. Later, on November 7 of the same year, at a meeting between the management of IG Farben and the staff of Wa. 9 and Wa. J. Rü. (Mun 3) discussed.

They were formally accepted in December when the Wehrmacht facility Wa. J. Rü. 9.IX issued a corresponding implementation order (signature 9 / IX-240-9018-39 of December 18, 1939).

Most of the measures taken by the SS in connection with the killing of concentration camp prisoners and inmates of institutions for the terminally ill or mentally ill - implemented under various euphemistic names - began, it seems, long after the outbreak of war. Therefore it seems as if the original recommendation of Tabun by the Wa. 9 are not based on human testing at specified levels. A large body of other data resulting from the workers' accidental contact [with Tabun] must have been available as early as 1939 (although this does not indicate that deaths had occurred before large-scale production began in 1942), and it seems likely that it was precisely such data that led to the above decision […].

German documents show that there were a total of 324 accidents up to 1941 (usually they were only minor, without fatalities).
Therefore, the following question arises: Was that sufficient, even under

> Taking animal test results into account to decide to start mass production in May 1942? After the start of industrial production there were ten fatal accidents, so if no human experiments were performed and the further conclusions are correct, these would be the first deaths caused by tabun. However, if we consider the aforementioned letter from Himmler, it seems extremely doubtful whether, under such difficult circumstances, higher party organizations would have gone to so much trouble and started the production of chemical weapons unless it had been clearly established that they also kill people could. This is because tabun was not offered to the armed forces as an "irritant" but as a deadly and fast-acting agent. [...]"

In concluding this chapter, I would once again encourage the reader to familiarize themselves with the contents of the last part of the second volume, because the history of a German superweapon described there fits very well with plans to unleash chemical warfare on a strategic scale . Let's take e.g. B. a secondary, seemingly enigmatic excerpt from the report of a witness who overheard the conversation of two SS men: **"Only those who are in the forest or high in the mountains will survive, since no shelter can prevent death." .**

The unknown research empire of the SS

Himmler's offensive in the armaments industry - the fall of Spee

The finding that the Reichsfuhrer SS continuously expanded his sphere of power and brought more and more functional areas of the state under his control during the course of the war is of course nothing new. Nevertheless, the concrete content behind this vague statement is only relatively superficially known. He had the ambition to make the organization he led not only the second armed force in the state after the Wehrmacht - which would be fewer in number but elitist - but over time also an economic power, but above all an indispensable component of a huge one armament machinery.

Shortly before the outbreak of war: Hitler, Himmler and General Paul Hausser to Hitler's right - General Inspector of the available troops, which later became the Waffen-SS, the real founder of the Waffen-SS. (archive of the author)

During the war he also entered the field of research to have the most dangerous types of weapons developed and researched. This

initially inconspicuous move, which did not even encounter any particular resistance from the other players within the Third Reich (neither from the Wehrmacht - for reasons explained at the end of the previous chapter - nor from the Reich Ministry for Armaments and War Production, primarily because Reichsminister Speer was initially not even aware of these measures) was to have serious consequences. Himmler was concerned with weapons that - had they been used - could not only have changed the increasingly dramatic course of the war, but would also have made the SS the control center for the most important arsenal of weapons, which also included weapons of mass destruction! That would have meant an almost automatic rise of Himmler's empire to a level comparable to that of the Wehrmacht.

This scenario was only not realized because the fronts changed too quickly. It should not be forgotten, however, that the foundations for this final stage of increasing SS influence had already been laid. This has been overlooked since the whole thing took place mainly in an area that was supposed to be part of the Soviet occupation zone - in Lower Silesia, but especially in occupied Czechoslovakia, which had come under the almost exclusive control of the SS. The evidence that allows for the formulation of such a thesis is quite solid and was mostly presented in the following chapters, although the previous two chapters contain a lot of previously unknown information that puts the Czech Republic in a special position on the map of the Third Reich.

Himmler looked with great hope to the sea of labor that was being assembled in the concentration camps (here: Dachau), for they were to become the foundation of his armaments empire. Many research institutions were also housed in the camps. (archive of the author)

However, before proceeding to this "last act" concerning the secret research projects of the SS, let us start at the beginning and look at Heinrich Himmler's gradually advancing "Industrial and Armaments Offensive". As we know, the concentration camps represented the first and quite strong starting point for the further development of this offensive. Compared to the "normal" armaments industry, the camps offered a certain superiority - advantages that could not be ignored, not to say: one "Monopoly".

The first benefit was that labor was available at virtually no cost, not only did one not have to worry about its fate, but it was available in virtually unlimited quantity. Without the "contribution" of the SS, it would simply not have been possible for the Third Reich to constantly expand industry and increase production despite ever-increasing problems.

An important source of information on this subject is a book by Albert Speer, which has been published under the title "The Slave State"[33]. The English-language edition has an even more telling title: "Infiltration - how Himmler built the SS economic empire". Although Speer's publication contains a rather fragmentary description, which needs much amplification and is biased (it represents a rival's point of view), it must nevertheless be regarded as required reading in the field. Therefore, I want to base this chapter primarily on this book. It is worth taking a closer look at Speer's opinions. Here is an example from 1944 that could be described as a "turning point": 33

> "In the spring of 1944, Hitler agreed to Himmler's proposal to set up an SS-owned business group in order to make the SS permanently independent of the state budget. With similar reasons, Hitler asked me to support Himmler's project. Thus years of efforts by Himmler had reached their goal. This approval from Hitler also made it clear that he was also responsible for

peacetime did not provide for strict authority of the state. Since 1933 he had undermined the state apparatus by emphasizing the party as the element that determined politics and administration. However, we had always suspected that he was basically concerned with the primacy of the party over the state and that he would not allow anything that might in turn weaken the party. Now it became clear that he wanted to give the SS its own position, independent of the state and the party. In the event of a successor who sought to use the state budget as an instrument to curtail the power of the SS and Gestapo, he wanted to create a source of money that would secure the SS's own budget. Such considerations presupposed a strangely relaxed relationship to his own imperial structure. This idea of an SS that was independent right down to the budget also had its origin in Hitler's tendency to create internal political counter-forces by constantly promoting opposites, which would be played off against one another in the distant future. The system had been tested, and the construction of a state within a state had long since been introduced into the political structure of the empire. The Minister of Food was opposed to an independently acting organization of the peasantry in the Reich Nutrition Stand; the German Labor Front formed a financially independent counterpoint to the Ministry of Labor as well as to the state bodies responsible for educational policy, and by 1942 the leading industrialists had replaced the administrative dominance of the state in the field of production.

The combine built in Auschwitz-Monowitz was one of Himmler's first "armaments installations". The picture shows Himmler visiting Monowitz, July 18, 1942. A first foretaste of the internal conflict within the SS - between plans for extermination and industrial projects. (archive of the author)

It wasn't just Himmler's thirst for power that was behind the building of a 'state within a state'; So there were also strange state-political considerations and that actually state-denying theory of independent sovereign powers."

(This claim is true, but reflects only part of the truth. The upswing of the "Kammler Empire" described below, including the projects implemented in the Czech Republic, show quite the opposite.)

This is followed by a sort of retrospective - the initial phase of the "SS Industrial Offensive" will be described, in which the concentration camps. This passage is unexpectedly interesting because Speer contrasts these plans with the plan to exterminate the Jews in a "new" way:

Himmler visiting Waffen SS units near Kharkiv - March 1943.

(archive of the author)

"At the end of 1941, Himmler intended to build up his industrial empire with the help of Jewish workers and other concentration camp prisoners. Hitler threw a spanner in the works. For Hitler there were two war aims in the second phase of the war: he wanted to conquer Russia and wipe out the Jews or, to use his usual terminology, 'exterminate' them. The last goal stood

> in the way of the first. For the 'extermination' of the Jews necessarily impeded both Himmler's plans and the continuation of the war. The millions of Jews who were lost to armament as a result of Hitler's decision, plus the hundreds of thousands of Soviet prisoners of war who died in German camps, could have solved our most pressing problem, the labor question. In addition, because of their intelligence, Jews were easier to work with at the lathe than Russian women, with whom one could not even communicate verbally.
>
> Faced with a choice, Hitler nevertheless decided to murder the Jews! At a Gauleiter meeting in Posen in October 1943, Himmler promised the top party leadership [in a speech to the group leaders] that by the end of the same year all Jews would be exterminated to the last man, polemicizing against those who, for various reasons, exceptions occur. But it was he himself who, a few weeks later, instructed tens of thousands of Jewish workers in the SS-owned plants in the eastern regions.
> This ambiguous behavior of the man who was responsible for the complete murder and who himself constantly broke through the policy of extermination leads me to assume that it was not Himmler who was the driving force behind the murder of the Jews, but rather that they hated Hitler, Goebbels and Bormann, this one engine, can be seen."

We must not forget, however, that the concentration camps represented a very competitive base on which to base rudiments of an SS economy - after the end of the extermination the camps would have ceased to exist! For Himmler, who planned for the long term, laying the foundations for the planned SS expansion that would last for more than a few years was more important than ideological issues. So, as a reminder, let's look at the information and descriptions of the industrial role of bearings.

According to Speer, the moment when Himmler sensed an opportunity to raise the rank of his organization on the road to economic expansion was the defeat at Moscow. At the beginning of 1942, Hitler became aware of the seriousness of the situation and ordered the

to give armaments efforts a higher priority than hitherto (at that time the armaments machinery of the Third Reich was actually working far below possible capacity). In particular, the armaments production for the army should be increased significantly. A period of economic triumph was to begin for Speer, the Reich Minister for Armaments and War Production, but Himmler also tried to take advantage of the new boom. I would like to refer again to an interesting example given by Speer: 33

As the war progressed, Himmler became increasingly interested in concepts that might become trumps in his hands. Here a visit to Peenemünde in April 1943.
(archive of the author)

> “Himmler was quick to speak [on any occasion], and he also tended to have far-reaching fantasies. But this time the realization of his plans for a sprawling industrial concern seemed within reach. Höss [the commandant of the Auschwitz concentration camp] reports in his autobiography that almost a year earlier, in March 1941, during a tour of the Auschwitz camp, Himmler had declared that he wanted to turn this camp into an armament center with a hundred thousand prisoners: 'I have I always dealt with this question [of the murder of the prisoners] in my reports, but I could do nothing against the pressure from Himmler, who kept wanting more prisoners for armament'. […]
>
> A few weeks later, Himmler's intentions to take advantage of the military emergency and build up an SS business group resulted in a fundamental change in the SS

> organizational structure down. On March 16, 1942, Oswald Pohl became responsible for all economic and administrative matters in the SS by merging various main offices. As the verdict against him also states, Pohl was not responsible for the admission or release of prisoners, nor for executions. His 'legal powers began with the arrival of the prisoners at the gates of the concentration camps'. But he and the Economic and Administrative Main Office of the SS, which he headed, were also responsible for 'the last details of pay, production and the deployment of the prisoners. [It] was also incumbent on him to provide food and clothing for the prisoners, and this obligation extended to the lowest level of distribution [up to] the actual responsibility that the prisoners received the necessary allocations'." Speer mentions in connection with An almost unknown detail in Himmler's plans. He mentions the trip of his special

representative Dr. Walter Schrieber to the USSR (although he was an SS officer and Himmler's informant in his ministry!) shortly before the attack on that country. Schrieber visited major industrial centers there, where he was to familiarize himself with the Soviet "concept" on the issue of labor security - using the Gulag camps there, which were indeed a mirror image of the German model. Himmler received a copy of Schrieber's report, which was obviously a kind of inspiration to him. A copy also went to the head of the Reich Security Main Office (RSHA), where it was taken up as an inspiration.

Himmler was interested in armaments concepts from the start, but he had to wait a long time for the right conditions to spread his wings in this area and sow the seeds of a self-sufficient "state within a state". Here he can be seen at an armaments exhibition in April 1937 - on the fourth anniversary of the emergence of the Third Reich. At the time, few suspected that a time would come when Himmler would become one of the most important figures in the state and, for a short time, in the economy. (archive of the author)

Kammler also familiarized himself with it. Schrieber himself was promoted to SS Oberfuhrer and later took an active part in the "industrialization" of the SS. It seems, then, that the Reichsfuhrer SS had the Soviet model in mind when developing his plans.

His next step was the creation of production facilities in five selected camps, where a total of 25,000 prisoners were to work (mainly in Buchenwald near Weimar, then in Neuengamme near Hamburg, in Sachsenhausen, Auschwitz and Ravensbrück). In April 1943, Himmler could already boast before Hitler that 140,000 people worked for the armaments industry in “his” camps. In fact, as Pohl soon corrected, there were even more, namely about 200,000, although according to Schrieber about 60,000 people worked in the production itself - each working an average of 250 hours a month. Irrespective of this, one could speak of a dynamic development of the "SS camp industry".

And one more thing, which is perhaps most important: there is no question that the importance of the SS grew over time, with the years 1944/45 am

are most significant. Only at this point in time can one seriously talk about the emergence of an empire - a brown state within a state, which, among other things, exerted a significant influence on all armament projects.

However, it is not only and not primarily about the quantity! Neither the Reich Ministry for Armaments and War Production nor the Wehrmacht could compete with Himmler's empire and its almost monopolistic role in some advanced armament projects. The establishment of underground industrial complexes that were owned by the SS. Such complexes as the association of large underground factories based on the Mauthausen concentration camp, the Lower Silesian *giant,* the nearby and unfinished *Concordia ,* or the kilometers of underground halls in the region around Nordhausen in Thuringia (the *Mittelwerk,* the B-11, the B 12, the B-3 and the B-17) have more or less always been under SS control, and their volume has often been measured in millions of cubic meters. It's these last two years of the war that seem really important and interesting.

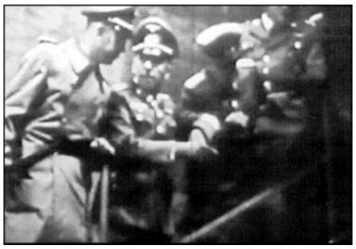
First, however, let us return to Speer's description. He also gives the number of people employed in almost all concentration camps (according to a September 1943 report, when the "camp industry" was just developing):[33]

The smile of the Reichsfuhrer probably reflects the first impression of the visit

from Peenemünde in April 1943. At first glance, tactical missiles represented such a huge technological leap that it was actually possible to give the impression that they would be able to decide the war - but that would not have been possible so quickly, and especially not with such a concept of their use (conventional retaliation) can occur. Seen to Himmler's right is Dornberg, the facility's military commander. (archive of the author)

"These construction measures were *not* intended for the death camps in Poland and Upper Silesia, such as Sobidor, Treblinka and Auschwitz. There the selected ones were killed [Speer probably wanted to emphasize the "mass extermination camps"]. Those able to work were sent to the camps intended for work. The survivors vegetated in them. For reasons of economy, there was an interest in preserving the lives of the inmates. Pohl listed these camps in his September 1943 report. Just listing them awakens memories of gruesome details in us: Dachau with 17,300, Sachsenhausen with 26,500, Buchenwald with 17,600, Mauthausen / Gusen with 21,100, Flossenbürg with 4,800, Neuengamme with 9,800, Auschwitz – men with 48,000, Auschwitz – women with 26,000 [together 74,000], Groß-Rosen with 5,000, Natzweiler [Natzweiler-Struthof] with 2,200, Bergen-Belsen with 3,300, Stutthof – men with 3,800, Stutthof – women with 500, Lublin [i.e. Majdanek] – men with 11,500, Lublin – women with 3,900, Ravensbrück - men with 3,100, Ravensbrück - women with 14,100, Riga with 3,000, Herzogenbusch with 2,500, i.e. together with 224,000 prisoners intended for work.

The quick delivery of the installation material [for sanitary purposes?] soon had positive consequences. Mortality in the concentration camps in December 1942 was still 10 percent of the total. It had steadily declined since then, falling to 2.23 percent in July 1943 and 2.09 percent in August 1943."



Himmler's visit to Peenemünde in April 1943. (Author's archive)

This data clearly shows that as the problems of warfare increased, so did the pressure to treat prisoners as an economic resource. In my opinion, Speer's earlier thesis sounds credible, that Himmler had no particular reason to increase the rate of extermination of the prisoners and that there was probably external pressure involved.

Let's have a look at Speer's descriptions of the year 1944: [33]

> "At the beginning of June 1944 I informed Hitler that I would of course always support the Reichsfuhrer SS in expanding its production facilities, but that clear responsibility had to be defined from the outset, because his production facilities would also have to be subject to the same controls as those of the other armaments and war production. I couldn't allow a part of the Wehrmacht [meaning the Waffen-SS] to go its own way, while I spent two years working hard on the armament of the three other parts of the Wehrmacht uniformly

summarized.' My record continues: 'The Führer agreed with this opinion and may be prepared to communicate this to the Reichsfuhrer SS. I declare that I will first try to clarify the matter myself with the Reichsfuhrer SS.' About a week later this meeting took place at Himmler's headquarters, his private villa near Berchtesgaden. (Barely a year later, shortly before the end of the war, Himmler suddenly told me that his mistress lived in this house and that she had given birth to a son there. He proudly pulled out of his wallet a photograph of the attractive young woman and the child .)

In this conversation in June 1944, Himmler confided in me that he intended to set up his own SS production from steel production to the finished product, and he explained his motives to me in a long conversation. He often talked to the Führer about the fact that after Hitler's death a non-SS tendency could one day dominate Reich politics. Now the SS is dependent on financial contributions from the Reich Minister of Finance, which of course means that the SS is completely dependent - which doesn't matter as long as the Führer exists. However, the Fiihrer agreed with him that it would be expedient for the SS to make itself independent of the Reich budget in the long term by building up its own industrial plants as a financial basis.

At the end of this opening, Himmler explained to me that his plans to build up a large business group had only failed because of the inadequacy of his employees. He lacked the man of genius who could help him set up an SS group.
Would I recommend a personality to him? I was in some embarrassment."

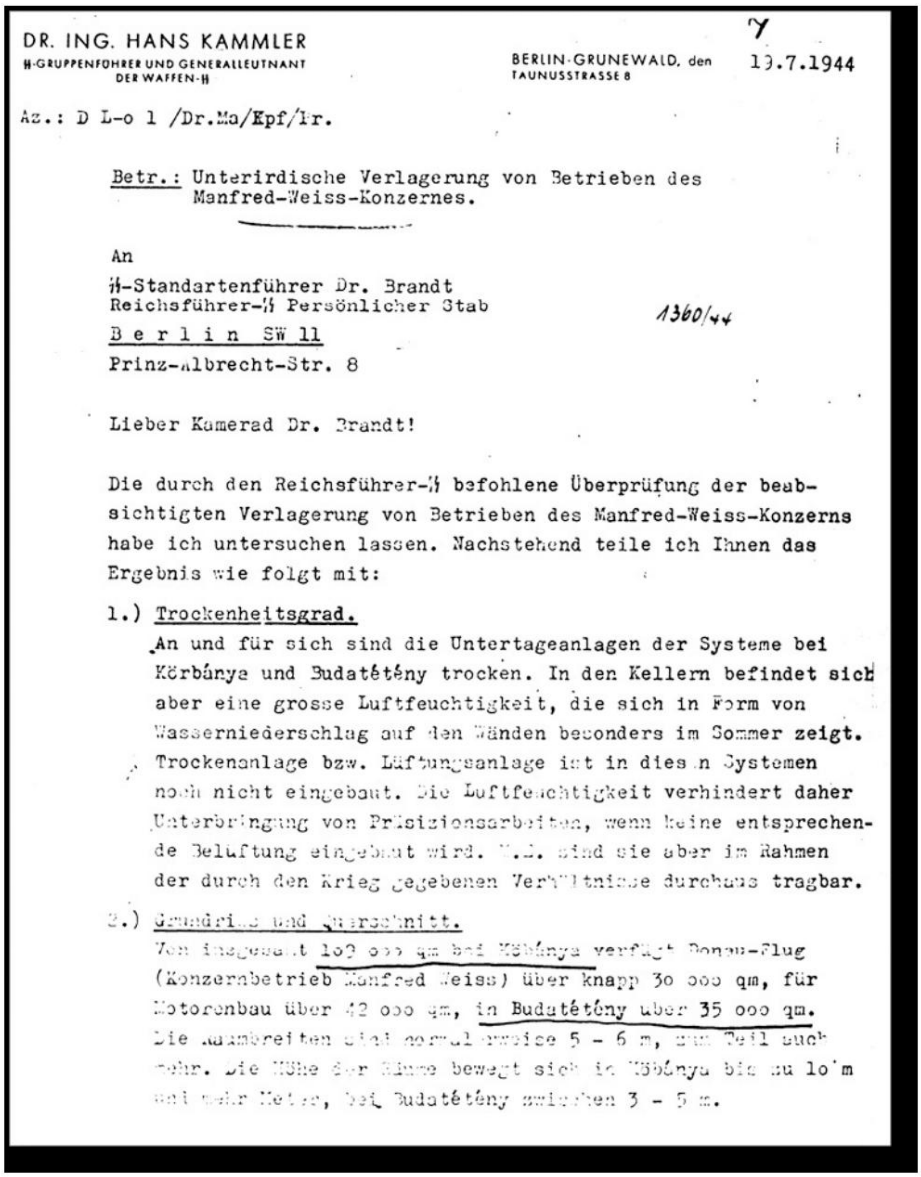
Himmler's second inspection at Peenemünde - June 29, 1943. (Author's archive)

Himmler in conversation with the commanders of the Waffen-SS on the western front - autumn 1944. (Author's archive)

This moment would soon mark the beginning of an impressive career for SS-Gruppenfuhrer Hans Kammler, which was described in the next chapter. Speer writes about Himmler's feeling of defeat, which he was able to convince himself of in June 1944. Things that were important from the SS point of view were not looking too good at the time, in that the ambitious projects still basically did not go beyond the expansion of factories directly connected to the concentration camps. Right now, however, that should change. Incidentally, the Jägerstab and other special authorities were set up in the spring; they were to deal with the construction of large underground armament complexes, where the development of advanced key types of weapons for the needs of the Luftwaffe was planned. Both these special authorities and the Jägerstab itself came under the influence of the SS after a certain time (thanks to Kammler's extraordinary skills and competence!) - first in a roundabout way, since the SS and its prisoners were the main contractors for these projects, and finally also formally - by that the armaments programs were subordinated to Kammler's special staff. This was a turning point in SS expansion,

the transition to a whole new level - although there was not enough time left to save the Third Reich from catastrophe.

However, it should not be forgotten that this created a system which, both then and later, was a paragon of organizational art and contributed to the creation of the myth of the SS as an organization which could operate effectively even when it was not compatible with all other areas of state activity already lacked. In addition, there were the favorable circumstances for the SS after the assassination attempt on Hitler on July 20, 1944 - after that Hitler actually only trusted the SS.



DR. ING. HANS KAMMLER
SS-GRUPPENFÜHRER UND GENERALLEUTNANT DER WAFFEN-SS

BERLIN-GRUNEWALD, den 19.7.1944
TAUNUSSTRASSE 8

Az.: D L-o 1 /Dr.Ma/Kpf/Ir.

Betr.: Unterirdische Verlagerung von Betrieben des Manfred-Weiss-Konzernes.

An
SS-Standartenführer Dr. Brandt
Reichsführer-SS Persönlicher Stab
B e r l i n SW 11
Prinz-Albrecht-Str. 8

1360/44

Lieber Kamerad Dr. Brandt!

Die durch den Reichsführer-SS befohlene Überprüfung der beabsichtigten Verlagerung von Betrieben des Manfred-Weiss-Konzerns habe ich untersuchen lassen. Nachstehend teile ich Ihnen das Ergebnis wie folgt mit:

1.) Trockenheitsgrad.
An und für sich sind die Untertageanlagen der Systeme bei Kőbánya und Budatétény trocken. In den Kellern befindet sich aber eine grosse Luftfeuchtigkeit, die sich in Form von Wasserniederschlag auf den Wänden besonders im Sommer zeigt. Trockenanlage bzw. Lüftungsanlage ist in diesen Systemen noch nicht eingebaut. Die Luftfeuchtigkeit verhindert daher Unterbringung von Präzisionsarbeiten, wenn keine entsprechende Belüftung eingebaut wird. M.E. sind sie aber im Rahmen der durch den Krieg gegebenen Verhältnisse durchaus tragbar.

2.) Grundriss und Querschnitt.
Von insgesamt 109 000 qm bei Kőbánya verfügt Donau-Flug (Konzernbetrieb Manfred Weiss) über knapp 30 000 qm, für Motorenbau über 42 000 qm, in Budatétény über 35 000 qm. Die Ausmasse sind normalerweise 5 - 6 m, zum Teil auch mehr. Die Höhe der Räume bewegt sich in Kőbánya bis zu 10 m bei mehr Metern, bei Budatétény zwischen 3 - 5 m.

Another turning point on the road to establishing the SS armor empire – a

A note should be added to the commentary on Speer's words. So far, Himmler's activities in the field of building the "SS empire" have manifested themselves on two levels: 1. The establishment of production plants in the concentration camps themselves (which was slowly but successfully accomplished);

2. Planning your own classic factories, including the steel industry mentioned - which, however, did not go beyond the planning phase. Speer refers to this and, on this basis, puts forward the thesis about Himmler's defeat in the industrial sector. However, this was only one of many areas. The following should also be mentioned: 3. The aforementioned construction of underground complexes – mainly from the spring of 1944; 4. The aforementioned takeover of armaments projects by Kammler, from the V2 to the extremely important projects described in one of the previous chapters in connection with weapons of mass destruction, which were also in the area of the Czech Republic - what next

described elsewhere in the book.

Regardless, there were signs of further action. Himmler made attempts to take over private companies. In the summer of 1944 he took over z. B. the largest armaments complex in Hungary - the Manfred Weiss concern. The pretext was the fact that some members of the management were of Jewish descent.

The concern was put under pressure and simply taken over (formally: bought out) without asking anyone for permission and, as Speer himself stated, without even informing his Reich Ministry for Armaments and War Production. So Himmler acted on several fronts, successfully compensating for weaknesses in one area on other fields.

A little-known expression of this “aggressiveness” on the part of the Reichsfuhrer SS was his personal interest in new types of weapons and modern technology in general. This was especially true for concepts that, in his opinion, could have turned out to be groundbreaking. bear witness to this

Certainly his attempts to exploit all available opportunities to conquer certain "strongholds" in the armaments sector - but it also shows how open this man was to new things! Speer also provides some information on this: 33

> "We also feared Himmler's thirst for knowledge because there was always the danger that he might get involved in development work and disrupt the progress of it with his amateurish initiative.
>
> On May 14, 1943 Himmler z. B. only met with Porsche at Hitler's headquarters to examine a wooden model of the 188-ton *Maus* tank, ready for production and being presented to Hitler . At the beginning of the same year, Himmler had heard that after a demonstration of the Flettner helicopter, Hitler had remarked that this project was very worthy of support.
> But Himmler had had the designer come a year earlier to be briefed on the pending project. Neither the *Maus* heavy tank nor the Flettner helicopter had anything to do with Himmler's work areas.

Summer 1941 – while inspecting his troops on the eastern front, Himmler familiarizes himself with the situation in the rear. (W. Frentz / Archive)

> In August 1943, as my minutes state, Hitler was told by someone else, probably by Himmler or his representative, about the development of a new infantry defense weapon.
> Hitler expressed his enthusiasm and immediately ordered that this 'Gerloff combat pistol [there is no data on this, not even in the firearms encyclopedia] must receive every support because of its extraordinary importance', 'above all in order to be able to decide as soon as possible which other current ones developments and

productions can be stopped'.

But Hitler's enthusiasm was unfounded. The minutes of a meeting with the Chief of Army Armament (Generaloberst Fromm) on January 21, 1944 soberly reports on this combat pistol: 'Weapon proclaimed as a miracle device; has a spread of 3 m in width and 4 m in height at 70 m. Next showing at the end of January. completion of the development cannot yet be overlooked. Test piece under repair. Projectiles spin up to 100m at combat range.' Such

failures and defeats could not dissuade Himmler and his confidants from supporting apparently revolutionary developments again and again. If such ideas came from the experiences of the SS troops, they could sometimes be reasonable. The 3-ton tracked vehicle *Maultier,* promoted by the 'SS Division Reich', was e.g. B. an excellent development. In the first days of January 1943, Hitler decided that a production of 1,000 pieces per month should be prepared. A further increase should be accelerated within the scope of the possibilities of the 3-t type.
Hitler gave the SS leader who had developed this SS caterpillar an endowment of 50,000 RM."

The Maultier was a hybrid between the Opel *Blitz truck* and a Panzerraupenfahrwerk (taken from the *Pz. Kpfw. I* or *Pz. Kpfw. II* from the armory). Of course, these were by no means the only examples of Himmler supporting research projects in various fields. The more advanced concepts have been described below, but we must at least not forget that under the SS auspices even certain handguns were developed, starting with the Bergmann submachine guns, e.g. B. the MP-35 (Bgm), and the light machine gun LMG-35 / 36 from Knorr- Bremse, to the revolutionary pistol for caseless ammunition described in Volume I, which incidentally, together with many equally interesting weapons in the "Czech Principality of SS", specifically developed at the SS and Police Academy in Brno.

Speer proves that the Reichsfuhrer's ambition was by no means limited to this. One of the areas in which Himmler began to play a key role was already in one of the chapters

described high-frequency research related to radars and related fields. At that time these were technically very advanced solutions (this research work is also of interest to us because it was carried out by the SS in a facility built in the Gross-Rosen concentration camp - see Volume II).

Speer confirms that the SS established the Institute for High Frequency Research - first in the Dachau concentration camp, then in Gross-Rosen in Lower Silesia. The institute was located in Ksiÿÿ (Fürstenstein near Waldenburg) and cooperated closely with the Luftwaffe. It should not be forgotten that right next to it was Professor Hubertus Strughold's space research facility, which is described below.

This information makes it possible to draw an important conclusion about Gross Rosen and Ksiÿÿ (where there was also a facility code-named *weather station ,* which was separated from the one described above). The point is that it is imprecise to limit the role of this scientific research institute of the SS to investigations into the equipment of American and British bombers. It was to conduct its own activity related to SS-owned projects without the knowledge of Speer's ministry or other government agencies!

Speer gives other examples of interference in existing projects (including those of the Wehrmacht!) or of the formation of new projects by the SS. B. the concept of the fast combat boat *Zisch,* supported by Himmler in the spring of 1944, which was developed by a certain SS Standartenfuhrer Frosch and was somewhat similar to the Linse concept described in the first volume. This project was worked on in the Wankel test workshops in Lindau. In this case it was about entering a field previously reserved by the Kriegsmarine.
In the end, Himmler wanted only the SS to take on the production! As is clear from the context, the pressure was very strong and effective; work was probably stopped only because the Allied landings in Normandy occurred before the completion of the development of this weapon (the combat boat was mainly intended to combat landing formations).

Speer also brings up other rather intriguing information that clearly indicates that all SS research, although expanded

was developed completely in secret, and he only became aware of its existence after the war! Here is a particularly important excerpt:[33]

> “It was only when I was looking through the 'Documents of the Reichsfuhrer SS' that I realized that Himmler had his own raw materials office as well as a technical office. Today I think it is conceivable that a kind of shadow administration was set up, which would one day replace the heads of the most important departments in my ministry. The fact that the SS developed its own weapons through this office seemed unnecessary and wasteful to me.” This

problem not only surprised the Reich Minister for Armaments and War Production, since it is basically unknown even today. As I already wrote in the last part of the previous volume, the witness statements on the key project made reference to the SS office that was responsible for this research work.

It was simply the code name of a secret agency "at the Waffen-SS office" with the abbreviation "FEP", which in all probability stood for "research, inventions, patents".

For several years no one could decipher what actually lay behind these words. Trying to solve this question got me on an interesting lead. The FEP was a kind of universal institution - there were such bodies in various offices, not only in the SS - they were denoted with Roman numerals. For a long time, however, practically nothing was known about this position attributed to the SS. After a long search, the following turned out:

Himmler at Hitler's *Berghof residence.* (W. Frentz / Archive)

Among the twelve or so SS central offices there was also the SS FHA, which was formally a command office of the Waffen-SS (insofar as the individual units were not subordinate to the front-line command posts of the Wehrmacht). Its leader was SS-Obergruppenfuhrer Hans Jüttner. After the organizational changes formally implemented on February 24, 1944, it was divided into five "Amtsgruppen" (lettered A through F), and independently about a dozen offices. Among them was Amt VIII called *Armor.* It was responsible for the realization of SS armaments projects. At its head was Otto Schwab, a brilliant doctor of physics. This alone testifies not only to the pressure exerted to carry out the research role, but also to the profile of this research work. The role played by Schwab was so secret that many documents did not refer to him as head of department, but as commander of the "Artillery School No. 1 of the Waffen-SS". It was only after the war that it turned out that this "school" was a research center in Glau, which is mentioned a few lines below. A series of rapid promotions also testifies to the importance of his true function – among other things, within two years (1942-

44) promoted from Standartenfuhrer to Gruppenfuhrer, that is, from Colonel to Major General. In a certain area, Office VIII dealt with the research work itself, but a separate special office was responsible for particularly important tasks, which was given the code name FEP already mentioned (in the files of the Personal Staff of the RFSS individual documents have survived that confirm this; unfortunately this is not the case for the documentation on Amt VIII proper, which is hardly surprising). The FEP's main interest was in concepts from the field of nuclear physics.

37, 38 She controlled that, among other things

SS nuclear research center in Glau, near Trebbin in Brandenburg, and a corresponding SS center in Pilsen, described below. The full name of this research center was therefore in the original spelling: SS-Führungshauptamt, Amtsgruppe "A" - T. Amt VIII FEP.

Independently of this, a "research and development group" was also active within the framework of Office VIII, which was headed by SS Brigade Commander Heinrich Gärtner. So far I have not been able to determine the nature of their connection with the FEP - whether e.g. B. the FEP body worked within this "group" or completely independently.

In contrast to Gärtner, Otto Schwab was considered an outstanding specialist and experienced organizer (similar to Kammler - contrary to some myths that were also created by Speer).

Together with members of his personal staff, Himmler visits the Litzmannstadt ghetto, one of his "industrial test plots". (Archive)

In addition, there was another institution that coordinated the SS research work - independently! In 1944, Himmler decided to use the knowledge and qualifications of the scientists imprisoned in the concentration camps. The whole thing was planned as a mass and well-organized measure and was aimed primarily at physicists, mathematicians and chemists, including Jews, of course. 37, 39 For this purpose, the Institute for Defense Scientific Purpose Research was founded under the umbrella of one of the departments of the German Ahnenerbe, a rather pseudo-scientific SS organization. The head of the institute was the former RSHA consultant Helmut Fischer, who dealt with "natural sciences". It is known that a "mathematical institute" was created in the Sachsenhausen concentration camp as part of this project; however, only 18 prisoners were employed there as scientists.

All in all, the "resort" linked to the Ahnenerbe was of only marginal importance in practice and only performed ancillary functions. In no way can it be compared with the technical office in the SS-FHA - it was more of a curiosity. However, it shows how multi-pronged Himmler's expansion was.

In his book, Speer gives a lot of space to Himmler's "Intrigues", ie the measures taken by the SD apparatus and the Gestapo against specific people in other institutions responsible for armaments. The pretext was their alleged incompetence, there were even allegations of subversion. The Reichsfuhrer SS obviously wanted to enter the field previously reserved for the Luftwaffe, which is why the Reich Aviation Ministry became the target of his heaviest attacks. This first "offensive" in the summer of 1944 did not achieve any clear effects, but Himmler was not deterred by temporary failures.

We must not forget that these were neither some empty threats, as the (misleading) "friendly" and "timid" letter to Speer might suggest, nor measures taken out of a broader context, for soon the SS took direct control over all advanced concepts of the Luftwaffe! So not only the department heads in the RLM had reason to worry, but also Speer

himself. His statements about the “second power” were by no means exaggerated.

Another move of the SS was the dispatch of a second memorandum on November 15, 1944, which was formulated more radically with regard to the measures required. Its author was SS-Standartenfuhrer Klumm - probably from the staff of the SS-FHA. Speer wrote: 33

> “In this recent memorandum the suspicion was voiced 'that forces are at work to prevent measures decisive for the war', which was a thinly veiled hint that the Gestapo might deal with the matter sometime. 'Events are showing us more and more', explained Klumm, 'that there really has to be a change in the commanding authorities if everything planned isn't to go wrong at the last moment.' […]
> 'I can only emphasize again and again that we have the better inventors and devices, but they don't have any effect.
> They are not even being developed by the RLM [Reich Ministry of Aviation], although they have been available for many, many years and could be used for the construction of new aircraft and offensive equipment.'" Contrary to Speer, who tried to portray Himmler as an

incompetent ignoramus, Soon he not only monopolized the armaments measures in aviation - including those related to the most modern types of weapons (more on this in the next chapter) - but he also had specialists with high qualifications who certainly did not inferior to Speer in terms of organizational skills. It is enough to mention Schwab and Kammler as an example.

The year 1944 also saw Himmler's rapid advancement in the military field. In addition to his previous functions, such as Reich Minister of the Interior or head of the Gestapo and other RSHA services, after July 20 Himmler became Hitler's plenipotentiary in all matters to do with front-line supplies. In December 1944 he assumed the position of Commander-in-Chief of the Upper Rhine Army, and several weeks later the command of Army Group Vistula. Even then, however, he was most concerned with the research work on new types of air force.

The Waffen-SS empire consisted not only of the ordinary army fighting alongside the Wehrmacht, but also of foreign legions (pictured: an officer and a non-commissioned officer of the Mountain Division *Prinz Eugen)* and research institutions, which are practically unknown to this day. (archive of the author)

Speer briefly comments on another noteworthy fact – on August 31, 1944, his decree (which resulted from Hitler's decree "On the Concentration of Measures in the Field of Armaments and War Production" of May 19) formally came into force, requiring the cessation of all ordered research projects, unless any project had been excluded from this procedure as a result of a lengthy procedure. Formally, the point was to increase production at the expense of research during the most difficult period. However, Speer bluntly writes that the real aim was to end the numerous SS projects (this is not the only example of Speer sabotaging Himmler's attempts, even if it was to have a negative impact on the situation of the Third Reich. "I became almost fired" – he wrote – for sabotaging the construction of underground factories, delaying the whole program by almost a year!). This confirms the thesis state Klumm's memorandum from November of that year stated that the SS not only aimed to take on "foreign" projects, but also wanted - perhaps even above all - to ensure at all costs the realization of certain of their own work, which Speer tried to torpedo. These were projects which, if realized (see previous chapter), would have given Himmler greater power than anything else. However, Speer adds with regard to his regulation: "The effect achieved was almost the opposite"! By the turn of the year 1944/45, Kammler was already prince of a real state within a state geared towards research, and SS control over selected research areas was already absolute, including the workforce,

the funding, the production base and - as a result - the secrecy. As he himself writes, Reichsminister Speer was not even informed about the existence of the office that was responsible for this research work.

However, Himmler's "offensive" included not only industry and scientific research itself. A separate "direction of attack" was the banks. Uninterrupted efforts have been made to accommodate familiar people (representatives) in them. At first it was all based on the tried and tested "Freundschaftskreis des Reichsfuhrer SS", which was in fact a not-so-formal financial lobby controlling large capital. The actual aim, however, was to place senior SS officers on the supervisory boards of large private banks. Success in this area has been limited. There were only a few familiar SS officers on the supervisory board of the Dresdner Bank, but it was one of the largest private banks (if not the largest). Curiously, Dresdner Bank was the only private bank to be excluded from the Nuremberg trials (at Washington's initiative). This probably reveals another aspect of Wolf's negotiations with Dulles in Zurich.

Kammler's special weapons program within the SS

It would be difficult to find a more ominous yet mysterious figure in the history of the Third Reich. Hans Kammler became the main executor of Himmler's plan to make the SS not only an "internal army" and elite of the armed forces, but also the ruler of a vast and for the time incredibly modern armaments empire. The symbol of this man's career is the assumption of control of the V2 program, which was comparable to the American nuclear weapons program from the point of view of deployed potential. However, this should only be the proverbial tip of the iceberg!

Kammler's career was the result of challenges to the hitherto unassailable position of Reichsminister Speer, whose image was adversely affected by many factors, including the inability to guarantee industry secrecy and protection against subversion, and the sabotage of moving factories underground . On the other hand, after the assassination in the summer of 1944, Hitler was prepared to give up the previous principle of the internal balance of power in the state and to grant the SS significantly more power than before. (author's collection)

The scale of the transformations set in motion by Kammler was so great that they would even have led to system changes in the Third Reich (provided they had survived the war). Suffice it to say that one of the planned elements was to move almost the entire defense industry underground by 1946. At the end of the war there were at least 800 different underground facilities (mostly factories) in various construction/ drilling/
adaptation phases. Some of them were just small treasures, but there were also dozens of true monsters, whose tunnels and hall complexes stretched for kilometers inside mountain ranges. Whole subterranean precincts emerged, sometimes connected to state leadership and command centers - I described this complex of topics in the two-volume work "Podziemne królestwo Hitlera" ("Hitler's Underground Kingdom"), which appeared in 2006. That would have changed the character of the entire economy of that country, and yet it was only one aspect of Kammler's activity.

The mere relocation of industry underground had a number of far-reaching consequences, one of which affected the form of government. A precedent of concern to industrialists was set, as (largely) private firms were housed in state and SS-controlled facilities, often with “state” labor at their disposal in the form of SS-provided prisoners. In this way a mixed capitalist-state economic order emerged. Speer assured that a continuation of such practices after the war was not planned and that capitalism would be maintained, however, so to say it is doubtful whether the SS would have relinquished its share of power so easily.

Speer sabotaged this program of "underground transformation" for almost a year (from about the summer of 1943 to the spring of 1944) because of similar fears. Private industry passed de facto into SS control, as the facilities were almost exclusively drilled by concentration camp prisoners and the SS retained power over them.

The government aspect mentioned above had another dimension: the basis of the economy was the return of slavery. How this looked in practice has already been described in countless books, but at least a brief description would be appropriate here to give an idea of it.

It is no exaggeration to say that the equivalent of hell on earth (or rather under it) was created for hundreds of thousands of people. Here is a short, little-known quote from Speer describing an inspection of the large underground Mittelwerk plants in Thuringia in December 1943. In the end they should have a volume of almost two million cubic meters and produce, among other things, V1 and V2 bullets: 33

> “The execution of this enormous task [ie the construction] demanded the last strength of the leading men [of the SS]. Some were to the point of being forced to go on vacation to refresh their nerves. The work was visited deep in the tunnels and inspected from above from the plane. Director Degenkolb and Brigade Commander Kammler shared the leadership.
> After a tour of about an hour we were there

> Barracks returned. What did I see: expressionless faces, dull eyes that didn't even show hatred, tired bodies in dirty blue-grey pants. As our group approached, they took up positions, pale blue caps in their hands, in response to a scathing command at attention. They seemed unable to react. - Scarcely two and a half years later I was supposed to take off my pale blue cap in the same clothes when a subordinate supervisor in the Spandau prison approached.
>
> The prisoners were malnourished and overtired; the cave air was cool and damp, stinking of feces and used up. The lack of oxygen made me dizzy too; I felt dizzy.
> Oddly enough, at that moment I thought of the Greek prisoners of war who, more than 2,000 years ago, dug the Syracuse Caves into the rock, which I had visited a few years earlier with Magda Goebbels, the sculptors Arno Breker and Joseph Thorak. At that time I had shuddered at the legacy of cruel centuries; now I saw more desolate pictures than my imagination had presented to me at the time. The SS leaders probably already knew the reaction of their visitors to this horrific picture. Because they immediately offered a grain of corn, which I - contrary to my habit - quickly downed."

Despite the limited productivity of the human debris clad in convict suits made of stinging nettles, Himmler boasted to his generals as early as June 21, 1944 during a speech in Sonthofen that he was building "huge underground factories".

He announced the completion of some large facilities by mid-August.

This must also incite resentment against Kammler himself, but we must not forget that Himmler's increasing pressure to use prisoners in the armaments industry and in drilling underground facilities also meant that it gave them a chance to survive. This motif is rarely mentioned in the context of the SS armament plans, but it was a departure from the Holocaust in its "pure form", as suggested by Speer in his earlier quotations! It

was an obstacle on the way to building an industrial empire. The lack of prisoners would have meant that, in Hitler's eyes, Himmler would lose one of its most important assets (it was not just a question of manpower, but equally the ease of keeping projects secret).

Kammler in the Waffen SS uniform with the rank insignia of the group leader. (author's collection)

Of course, that doesn't change the fact that Kammler was reminiscent of a vicar of the devil endowed with equal parts ruthlessness and organizational talent. The peak of his career came at a crisis point in the short history of the Third Reich, when time was running out and adversity mounting. As a result, his approach was principled and almost invariably draconian. He had the power to give direct orders to the SD officers (Security Service of the SS) in his area of activity, and unlike the officials of the Speer Ministry or the Todt organization, he did not hesitate to use this power, which amounted to the fact that he arrested and liquidated officials of the industrial apparatus who did not carry out the tasks entrusted to them. Kammler's path, which led through the area of concentration of "special enterprises" of all kinds, was a death route - not only from the point of view of the prisoners and forced laborers.

In describing this man's career, there is one more note

over the innumerable titles that multiplied with his name (“Special Representative for …” and “Special Representative of the Führer for …”), especially from the autumn of 1944. This requires a rather important comment of a general nature. National Socialism introduced a number of new customs in political and social life. One of them resulted from the “leadership principle”. Kammler's career follows this concept in an exemplary manner, based on the fact that the executive role given to offices has been abandoned in favor of the prerogative of specific people. There was e.g. For example, there were no “higher leadership offices for the SS and police” in the function of the responsible state leadership elements (in any area), but there was the Higher SS and Police Leader (HSSPF).

The principle of "commandant's offices" (instead of "commandant's offices") worked according to a similar principle. A perfect example of the concept of the “Führer principle” were also the Gauleiters – party representatives in the Gaus (which broadly corresponded to today’s federal states – the Gau harks back to the epoch of district divisions in the First Reich). A current equivalent is e.g.

B. the office of rector or bishop - not the rectorate, but the rector is the governing body of the university. In the same way, each of the many dozen (!) titles that SS Obergruppenfuhrer Hans Kammler possessed is to be understood – not as a competence resulting from the official function, but as the identity of a legal entity. This was, of course, a link to the feudal tradition, and it is difficult not to link this process to the intention to (additionally) introduce “regular” aristocratic titles in the SS after the war. The titles, moreover, should be followed by a much broader reality.

The drift towards a mixed capitalist-socialist-feudal system calls to mind another circumstance that reflects the character of this man. During the first phase of the war, when Hitler and Stalin were allies, Kammler was in the USSR as a seconded staff officer. There he had the opportunity to get acquainted with the Soviet methods of leadership and administration. This is potentially important inasmuch as Kammler introduced a much more centralized system in the armaments industry, in contrast to Speer, who preferred to rely more on the autonomy of administrative cadres in business. The then Standartenfuhrer (Colonel) only returned before the

Attack on the USSR returned to the Reich.

Contemporaries' opinions of Kammler were consistently negative, but the rule also included an air of fascination based on something undefinable, as if he were the embodiment of some dark genius. General Walther Dornberger, who was responsible for the research work on the V2 on the part of the Wehrmacht, could remember the following features:

> “His watchful, penetrating eyes gave the impression of standing in front of a Renaissance-era hireling.
> His strongly formed mouth with protruding lips expressed brutality and arrogance.”

SS-Obersturmbannfuhrer (Lieutenant Colonel) Rudolf Höss – the first commandant of the Auschwitz concentration camp (with whom Kammler collaborated on redesigning gas chambers to increase their efficiency), described him simply as: "Upright and modest in private life".

But how was he perceived by people from the outside? An American diplomat accredited in Berlin remembered the almost 40-year-old officer as follows:
40

> "He was born to wear a uniform, although he looked just as good in a neatly tailored riding vest. His love of horses and equestrian sports brought him popularity in Berlin circles. However, he was always unpredictable.”

The British explorer and historian Tom Agoston wrote of the time: “If 40
> Kammler had lived in ancient Egypt, the snobbish pharaohs, who always wanted to outshine the earlier dynasties, would surely have turned to him to build the pyramids. In the Rome of the Caesars he would have been celebrated as the builder of the Colosseum, where the gladiator superstars of the time competed for the thumbs-up of a crowd of 50,000 strong.”

Before presenting the biography of this man and his tremendous power in the final phase of the war, I would like to return to some of Speer's descriptions as an introduction, since they

on the one hand almost have the status of a document and reveal the sometimes curious mechanisms of a certain process, but on the other hand are also particularly applicable: 33

> “Barely 14 days after my recovery from an illness lasting several months, on May 12, 1944, I tried to contain the influence of the SS on my departments by redistributing tasks in the A4 program. The SS Economic Administration Main Office was then essentially left with the expansion of the central works. It provided the prisoners required for expansion and production as labourers, who were also solely subject to the disciplinary powers of the SS. The development and testing of the A4 was again the responsibility of the Army High Command, namely the Army Weapons Office, and was the responsibility of General Dornberger. The special committee A4 of my ministry, headed by Degenkolb, drew up the production program, secured the technical production requirements and ensured that machines, accessories and materials were provided in good time.
>
> In contrast to Himmler's arbitrary claim to leadership, the management responsible for production was to be the management of the Mittelwerk under the leadership of the management provided by the organs of self-responsibility, which was under the direction of the director of Demag, Georg Rickhey. My position was strengthened after my reconciliation with Hitler, and so I was also able to speak up to Himmler.
>
> However, my attempt to curb the SS leadership's claim to power over the entire production quickly failed. Himmler, who after July 20, 1944 had become Fromm's successor as 'Commander of the Reserve Army and Chief of Army Armaments', handed over to Kammler on 6 August 1944 'responsible for carrying out all preparations for achieving operational capability of the A4. […] You are only subordinate to me and the [Staff] Chief BdE [Commander of the Reserve Army] and [Staff] Chief HRüst [Army Armor], SS Obergruppenfuhrer Jüttner.' In his new abundance of power, Himmler did not even consider it necessary to at least comply with the form and send me a copy of this order. I

was meanwhile burdened by the fact that my name had been discovered on the ministerial list of conspirators.

A short time later, Kammler wrote to Saur and specified Himmler's unclearly expressed authorization. Five days later I protested to Jüttner: 'As I read a letter from Dr. Kammler to Herr Saur, the Reichsfuhrer SS, in his capacity as Commander-in-Chief of the Home Army, gave him responsibility for the manufacture and use of the A4 device. The A4 special committee headed by Director Degenkolb is solely responsible for the production of the A4 device, which is under Mr Saur's overall responsibility. I ask you to have the order of the Reichsfuhrer SS to Herr Kammler changed accordingly after consultation with me. But I achieved little. Even in small matters, Himmler now made sure that the decision in all matters relating to the A4 remained with him. It was up to the responsible ministers to propose to Hitler that Knight's Crosses be awarded for the Civil War Merit Cross. Now Himmler took the initiative in this area as well. On September 28, 1944, he had Hitler approve the Knight's Crosses for Dornberger and two of his employees on the A4 project, Riedel and Kunze. Casually and irreverently, he added to me in a telex: 'I think it would be best for you to submit the formal proposals. I made Himmler wait six weeks for an answer. For the V2, 'so far Mr. Rickhey [director of Mittelwerke] and Mr. Kunze and from the area of Chief HRüst [army armament] General Dornberger and the fallen Dr. Thiel, one of the designers, planned'. Himmler ignored the actual initiator of rocket development, Wernher von Braun. I found that grotesque. So I wrote to Himmler that it seemed to me 'necessary to award him [Wernher von Braun] with the Knight's Cross of the War Merit Cross, having served as General Dornberger's closest associate since development of the A4 began ten years ago'.

In the winter of December 31, 1944, Himmler no longer considered it appropriate to redefine his 'demarcation of work areas and

responsibilities in the area of the A4 program' with my departments. My ministry is not on the distribution list for this order. The order should only be sent to him 'after the fact'. An obvious humiliation, because that meant translated from the official German that I was not involved in this matter. In our context, this apparently insignificant detail is more important for the assessment of this decree than its lengthy content. Further decrees by Himmler and Kammler followed, but they did not change anything about the fact that they took full responsibility for A4 development and production."

Speer described Kammler as a talented, energetic, but also unscrupulous organizer - for this reason he compared him to Heydrich.
His effectiveness and speed of action must have horrified the Reich Minister, which is best illustrated by the following words: "The SS said that Kammler was prepared for my successor!"

Kammler, still as a brigade commander. (author's collection)

The later SS Obergruppenfuhrer Dr. Ing. Hans Friedrich Karl Franz Kammler was born on August 26, 1901 in Szczecin (Stettin). After a while his parents moved to Bydgoszcz (Bromberg), where he went to general school at the age of seven. That was not the end of the family wanderings - after four years they moved to Ulm on the Danube, and during the First World War to Danzig, where Kammler

graduated from high school. He was too young to take part in the World War, but linked his fate to the army relatively early. In February 1919, at the age of 18, he voluntarily joined the army, namely the Leib-Husarenregiment Danzig. This did not prevent him from joining the nationalist Freikorps in May 1919, also in Danzig.
The Reichswehr was subject to reductions by virtue of the peace treaty, and Kammler returned home after six months.

The period leading up to the outbreak of the Second World War is of no great importance to us, so I will only touch on the most important events. [41] It is important, among other things, that Kammler began studying architecture at the Technical University of Danzig in October 1919 (it was the construction industry that later paved the way for his career in the SS). Four years later he already had an engineering degree. In the meantime, he also worked in a local sugar factory, where he was also commissioned with construction work. In the years 1921/22 he also worked in the Danzig settlement office. In the years 1924-28 he already showed his ambition by holding many posts at the same time and realizing numerous demanding tasks. He was e.g. B. Assistant in the Berlin office of the Prussian Building Authority and even dealt with financial analyses. For a year he was an intern in a respected Berlin architect's office, took part in the design and construction of the modern Zehlendorf-West large housing estate in the German capital, etc. His own designs have been proposed for several competitions. His resume at that time would have been so extensive that it would be difficult to fit it into a few pages.

It is worth mentioning that on April 1, 1928, at the age of 26, Kammler was already a research associate at a state research institute that dealt with the economic aspect of construction projects (Reich Research Society for Economic Questions in Building and Housing). In 1931 he was an independent consultant responsible for planning similar projects in the Reich Ministry of Labour.
At the same time, he was employed in the Gauleitung (the district headquarters of the party) in Berlin, where he had the opportunity to meet Speer (who was also an architect at the time!) during the work on a far-reaching transformation of the Reich capital. Even then, Hitler dreamed of transforming Berlin into the great European capital Germania.

Meanwhile, in 1928, Kammler married Jutta Horn, a 22-year-old pastor's daughter from Naumburg (Nowogród Bobrzaÿski was then called Naumburg am Bober, is that the town?). on the 1st
On March 1, 1931, he joined the NSDAP, left the Protestant Church and, in accordance with the National Socialist guidelines, entered "God-believing" in the "Religion" section of all documents. In November 1932 he received his doctorate from the Technical University of Hanover and joined the SS in May next year. One could therefore dare to claim that he had managed to create a kind of springboard for his later career in good time, even before Hitler came to power.

In any case, membership in the party opened the way for him to leading positions in the state administration. In 1934, Kammler became a member of the board of directors of Gemeinwohlige Wohnungsbau AG - Groß-Berlin, a company that had been set up primarily to transform Berlin, as well as an advisor to the Reich Ministry of Food and Agriculture. A year later he became a member of a research group that dealt with large-scale construction projects in the Reich Ministry of Labor. In June 1936 he became a consultant for construction matters in one of the military air circles in the Reich Ministry of Aviation (in the Third Reich there was this separate subdivision, moreover, the division into military circles of the Waffen-SS did not coincide at all with the corresponding division of the Wehrmacht). This gave the impression that he wanted to combine his career with the Air Force. That didn't happen, but he had at least certain qualifications to take control of the Jäger factories in 1945. In November 1936 he was promoted to Government Air Force Architectural Officer and from that point on came to work in a yellow-tapped uniform with the rank insignia of a major – although he was not promoted to the rank of officer!
Regardless of these functions, Kammler was promoted to SS Untersturmfuhrer (Lieutenant) in 1936 and took up a post in the SS Race and Settlement Main Office (SS-RuSHA).

Hans Kammler. (author's collection)

Since that time he has been associated with ministerial functions in the Air Force various assignments in the SS.

On June 1, 1937, he was given the uniform of a lieutenant in the main office for races and settlements and became senior government building officer. In the same year he became an instructor at the Schupo in Berlin, where he conducted training courses for police officers. At this time his career began to turn more and more towards the SS. A period of rapid promotions began - on 12. September 1937 to SS-Hauptsturmfuhrer (Captain); on September 11, 1938, almost exactly one year later, to SS-Sturmbannfuhrer (Major), and on September 1 June 1939, just over half a year later, SS Obersturmbannführer (lieutenant colonel). In 1939 he also became head of the "high building group" in department LD-5 (construction) in the Reich Air Ministry. In the meantime he became the German representative at the international urban planning congress in Stockholm. On May 20, 1940, he became the construction director of the Luftwaffe, making him the youngest of the four construction directors at the RLM. As an Air Force official, he already wore the military uniform of a colonel.

In August he was also promoted to the equivalent rank of SS Standartenfuhrer in the SS. At the same time he was assigned to serve in the SS Economic and Administrative Main Office (SS-WVHA). After the RLM, this became like another "ladder" that he could use to climb the higher career levels. As early as June 1, 1941, he was formally promoted to SS-Oberführer (brigadier, a rank between colonel and major general). After another ten months he had the first rank of general: he became an SS brigade commander and major general of the Waffen SS!

At the same time as he took over the function in the SS-WVHA, he became the head of the department for settlement affairs in the main staff office of the

Reich Commissioner for the Consolidation of German Nationality (RKF) - this function was previously performed by Himmler.

In November 1940, he also took on the position of General Referee for the standardization of fundamental and building law on the staff of the Reich Commissioner for Social Housing (Robert Ley), which was linked to the plans for the long-term reconstruction of Berlin. Due to such a multitude of tasks, on May 29, 1941 he finally gave up all functions previously held in the Reich Air Ministry.

From June 1, 1941 to February 1, 1942, he was also head of Office II (Buildings) in the Main Office for Budget and Buildings, which was set up in connection with large-scale plans to expand police and Waffen SS facilities in the " occupied eastern territories" to the Urals and the Caspian Sea, but also in the so-called "Protectorate" (Czech Republic), the General Government, in Scandinavia and Holland
was.

Kammler accompanies Himmler during an inspection in Monowitz – July 18, 1942. Among other things, he was responsible for expanding the crematoria in Auschwitz. (author's collection)

Amounts of around twelve billion marks were planned for these goals at the time. Since this procedure had to go hand in hand with the extermination of the previous population, part of these plans consisted of building and expanding mass extermination camps, especially the crematoria in the east - for which Kammler was personally responsible. in the

As part of these tasks, Kammler, Himmler, Pohl and Globocnik met in Lublin on July 20, 1941. The latter was Higher SS and Police Leader of the Lublin District. During this memorable conversation, the framework for a multiple increase in the "capacity" of concentration camps in this part of the General Government to about 50,000 people a day was outlined!

On September 22, 1941, on Himmler's instructions, Kammler sent out a decree for the establishment of the "Waffen SS POW camp in Lublin" (Majdanek), where initially only USSR citizens were to go. In December he ordered 150,000 prisoners of war to be sent to Majdanek and 200,000 to Auschwitz.

On February 1, 1942, after being promoted to brigade commander, Kammler took over the management of office group "C" (construction) in the SS economic and administrative main office and became the authorized representative of office manager Pohl for armament matters. The first important tasks concerned the camps in occupied Poland. The period of regular trips to Auschwitz and Majdanek began. In July, Kammler presented models and plans for expanding the concentration camps and converting them into large forced labor centers at the Berlin headquarters. He also begins to control the expansion of crematoria in Auschwitz. Kammler is appointed as the main person responsible for increasing the "capacity" of the gas chambers and ovens there from 10,000 to 60,000 people a day!
In Berlin, Hitler inspected the camp model (with hand-painted small details), which had been meticulously, almost suggestively, made under Kammler's supervision after the expansion. In August, Kammler went to the Ukraine, where he inspected the Belzec extermination camp, among other things. In the quarters in Vinnytsia he talked to Himmler and Eichmann (head of the Gestapo's "Jewish Department") about plans for the mass extermination of the eastern population. In September, during a conversation with Speer, he informed him about the decision made together with Himmler and Pohl to use concentration camp prisoners en masse in armaments factories. In May 1943 there were numerous reports about the need to improve the living conditions of the prisoners if the armament tasks were to be carried out. There was little improvement in that area.
In 1943, after the Warsaw Ghetto Uprising was crushed, Kammler was entrusted with the task of managing the ruins and

to ensure that no trace of the last inhabitants remained. The manner in which orders were carried out surprised even Hitler. The whole district was leveled to the ground. Not only pipes and cables, but all the bricks that could be reused were carefully dug out of the smoking rubble and counted with a truly German precision. It was 34 million.

On August 21, 1943, Himmler formally assumed responsibility for the production of the V2 rockets. SS Brigadefuehrer Kammler became the main executor of this program. On the same day, the "Sonderstab Kammler" was set up. The “Baubüro Dr. Kammler" based in Berlin and numerous "SS special inspections" throughout the Reich. They were in turn subordinate to the local SS command staffs. This was another turning point in this man's career and in the history of the SS expansion.

Speer wrote (concerning a somewhat later period, when production of the V2 was already underway): "On August 6, 1944, he [Himmler]

> entrusted Kammler with 'responsibility for the A4 [V2] reaching full combat capability .
> You are responsible only to me and SS-Obergruppenfuhrer Jüttner'.
> In his new domain of power, Himmler didn't even bother to keep form and send me a copy of this order."

This information means that the "Sonderstab" will carry out its activities in close cooperation with the already mentioned "T. Amt VIII" in the SS leadership main office (headed by Jüttner). The leading person in the "special staff" was Dr.
Fritz Schmelter, who headed the department for the use of forced labor. The main task of the special staff was the expansion of underground factories throughout the German Reich. As a result, Kammler was later able to intervene in the area of competence of the Jägerstab, since the success of this staff depended to the same extent on the construction of underground factories. We'll get back to that in a moment. Kammler's construction office was divided into three separate SS leadership staffs, which were given the letters A, B, and S. Staff A was responsible for protecting the armaments factories themselves from air raids, Staff B had the same

Function related to companies collaborating with other high priority companies, while Stab S implemented various special projects.

In August 1943, on Kammler's instructions, the *Dora* satellite camp belonging to the Buchenwald concentration camp was set up in Thuringia , which was primarily intended to provide workers for the expansion of the large underground *Mittelwerk* factory already described . The first prisoners were brought there on August 28th. On October 1, 1944, *Dora* became a separate concentration camp under the name *Mittelbau.*
Soon it already had 30 external work details. They drilled a number of other underground factories, often of similar size, intended primarily for aviation and missile production.

In November 1943, Kammler became a member of the Advisory Council of Mittelwerk GmbH. The project was considered a great success due to the scale of the underground operations, which were built relatively quickly at the time of the general war troubles. Then, on the 17
December 1943, Kammler was commissioned in writing by Reich Minister Speer himself with the "implementation of special construction projects". It was only a formality, but it showed the competition's recognition of the achievements. Shortly thereafter, in January 1944, the first mass-produced V2 rockets began to leave the *Mittelwerk* halls .

Another turning point in Kammler's career came on March 1, 1944, when the Jägerstab was formed. He was to deal with the coordination of industrial projects generally devoted to the reconstruction and modernization of Luftwaffe fighter manufacture. The aim, of course, was to stop the waves of Allied bombers that appeared in the thousands in the skies over the Third Reich (e.g. the Americans made about 90,000 planes that same year!). It was primarily about building underground factories, since other facilities would have had no reason to exist, but at the same time it was also about starting the mass production of jet fighters, which were rightly considered a great technical asset. Kammler became a member of the Jägerstab as a representative of Himmler (in practice this function was performed in his absence by Fritz Schmelter, who was also a member). Furthermore

in the existing one situation

a few days later (on March 5), Kammler was also given special powers to implement the fighter program by Reich Marshal Goering. Karl Otto Saur, who had previously headed the technology department in Speer's Reich Ministry for Armaments and War Production, became head of the Jägerstab. Speer and the Inspector General of the Air Force, Erhard Milch, nominated him for this post at the same time. As part of this staff, Kammler was responsible for setting up a production area that was protected from aerial bombs. When the staff came into being, it began to further build or develop itself.
to deal with the reconstruction of 20 existing companies. A number of large and modern underground factories were to be built from the ground up as part of this program, including the *salmon* in Thüringen, the *Bergkristall* near Linz (the two largest factories - they would make the Me-262), and a number of upper - and underground facilities called *Weingut* in Bayern - mostly also for Messerschmitt. Let's let Speer have his say on this question again: 33

> "One of the permanent members of this hunting staff since its inception was Dr. Ing. Kammler. He accepted the measures ordered for Saur's construction sector to relocate industrial objects, insofar as the Todt Organization did not reserve the right to carry them out. These measures were at the highest level of urgency and therefore for such projects z. B. also allocated the necessary quotas for building barracks. In contrast to the sparse allocations of 1943, this enabled the SS building administration to increase its storage capacity.
>
> 'According to an order from Himmler, the labor deployment of the prisoners for the so-called relocation construction measures', explained the head of Office Group B of the SS Economic Administration Main Office, 'not of Office Group D, but of General Kammler. However, not in his capacity as chief of office group C (construction), but personally [see the “leadership principle”]. He had his own office and the title 'Special Representative of the Reichsfuhrer SS'. Since Kammler is responsible for underground

Since relocations had also been transferred by Göring on March 4, 1944, he was able to take advantage of all the advantages of a 'double horse' and, depending on his needs, call on one or the other office.

'Kammler had the unusual power', Professor Bartel quotes the former director general of Mittelwerke, Georg Rickhey, 'to have any person who, in his opinion, interfered with the course of the measures ordered by him without authorization arrested via the SD department under his personal authority . Since Kammler used this power ruthlessly at all times, including towards SS leaders, an intervention by other people or departments in the labor deployment [of the prisoners], which was the most important aspect of Kammler's technical tasks, was completely excluded.' […]

The activities of Kammler, a ruthless but capable robot, were to initiate a development from the spring of 1944 that would integrate hundreds of thousands of prisoners into the production process under the harshest conditions; but that was what gave these hundreds of thousands a chance to survive. […]

In his speech to generals in Sonthofen on April 21, Himmler reported:

June 1944 that prisoners 'large underground factories are built. In the last few weeks we have created ten underground factory rooms with tens of thousands of square meters of floor space in eight weeks at a pace that was not thought possible.' In fact, an organizationally and technically remarkable achievement was accomplished. Six months later, Kammler reported to the Reichsfuhrer SS about 'the production areas of bomb-proof underground production facilities for the armaments staff completed [by the SS] in 1944 on behalf of the Reich Minister for Armaments and War Production'."

On January 30, 1944, Kammler was promoted to Gruppenfuhrer (Major General). In the course of the escalation of "special actions" and the ever-increasing time pressure, the ruthlessness of this man, who completely disregarded human life - not only the prisoners - came to the fore! In May he presented z. B. at a meeting with Field Marshal Milch, who knew more about an aviation project

wanted, unashamedly stated that "he had to hang 30 people", but "now everything was fine". Milch then wrote an official protest note, but this obviously made no particular impression on Kammler, since at another conference he mentioned just as casually and even proudly that he had “sent 50,000 people to the camps” to increase the workforce for the to add SS.

Kammler in Auschwitz - July 17, 1942 (second from right).

In June 1944, Kammler again surprised his superiors with his ability to carefully carry out even a large-scale, at the same time urgent, atypical and extremely difficult organizational task. At 6.
On June 10, the Allied forces conducted a troop landing on the Normandy coast, and as early as June 10, Kammler sent a secret report to Himmler, in which he listed all the equipment and raw materials that had been removed from the endangered French area within a few days - under frontline conditions could be taken away! The report contained a long list, including kilometers of railroad tracks (counted accurately!), cables, tons of scrap metal (stating the individual metals and alloys), locomotives and heavy machinery. It was precisely this astonishment, unleashed by similar, only seemingly prosaic, performances that contributed to the lightning-fast career pace of the group leader over the next few months. It must not be forgotten that what is actually amazing is the ability to exercise many

similar functions. Here's a perfect example - it's about events that took place around the same time: There is an interesting entry in the documentation about Kammler that he was supposed to "by order of the Reichsfuhrer SS with all his might destroy Professor Porsche [SS-Oberfuhrer Ferdinand Porsche, a well-known designer] to support the proposed relocation [of production] to *Mittelwerk* ". So not only the production of rockets should start underground! The comment stated that it was about an unknown type of secret weapon! Incidentally, this is also mentioned in the documents of Himmler's personal staff. 48 This certainly did not refer to the V2 rocket, which had been in production there for six months. The whole thing is quite a curiosity and an enigma, which brings to mind the report of industrial espionage by the Polish Home Army already described in the first volume. It directly mentions the preparations for the production of any weapons or equipment at this very facility, which were unmistakably linked to nuclear technology and hitherto unknown (report from March 1944).

which is dated June 19, 1944. [41]

[16] Special masks and a lead-protected chamber are described there:

> "These missiles are made from a very light material called 'thol' and are loaded with glass containers containing unknown liquids and a small amount of explosives. The chemists present at this filling work in special clothing and masks, sometimes in lead chambers."

Sometimes what appears to be an obvious and "long-established" aspect of the war turns out to have unresolved and relatively important issues that shed a whole new light on it. So it was e.g. B. with the underground part of Peenemünde, which is mentioned in various and completely independent intelligence reports - both American and those of the Polish Home Army. Here we are dealing with a similarly enigmatic story of great importance, which has been completely overlooked in numerous publications on the *Mittelwerk !* It is unmistakably a system related to chemical weapons on the one hand and nuclear physics on the other (although not necessarily nuclear weapons, which in June 1944 were not

gave). Perhaps these were the strategic weapons described below, intended to transport the chemical arsenal (the "missiles" mentioned). This seems very likely, especially given the information presented below about a new engine based on new sources, as well as the designation *Thol,* which probably evoked Edward Tholen, the inventor of a new alloy mentioned in Volume II.

Regardless, what seems most important is that Kammler was evidently involved in preparations for unleashing all-out chemical warfare (described in a previous chapter), and that if part of the *Mittelwerk* was spun off to that end, these preparations must have had a high priority . They also had to be kept under particularly strict secrecy, if information about them is not generally known even today!

On August 31, 1944, Himmler gave Kammler an order by virtue of which Kammler was given command of all units equipped with V2 rockets. On September 5, he was formally appointed leader of the FR troops. A day later, Kammler was able to add another to the long list of "representative titles": "Special Representative of the Reichsfuhrer SS for the A4 program". This meant formally taking control of all aspects of both production and combat application.

On October 1, Kammler was appointed commander of the specially created "Division z. V." ("in retaliation") appointed. This included all V2 rocket units, and from November 13 also a special formation designed to operate the V3 multi-chamber cannon. For this purpose, a special bunker - a so-called "launch position" - was already built in Mimoyecques on the French coast, 153 km from central London, which was intended as a target. It was planned to install 25 guns underground. During the research work it turned out that their firing range was completely insufficient, so the project was abandoned on February 14, 1945 (see Volume I). However, according to relatively reliable sources, the V3 was used in combat! It is Z. For example, it is known that in February 1945 a cannon was installed near Hermeskeil, from which six projectiles were fired in the direction of Luxembourg on February 22nd!

[41] Part of the "Division z. V." were also the batteries of the unguided ground-to-ground

Rocket *Rheinbote.* On November 28, Hitler made the decision to hand over units with *Enzian* -type anti-aircraft guided missiles to the division (which, however, could never be finally formed) . On the 27th.
On January 1, 1945, the division was converted into an army corps and given the name "Armeekorps z. V." On December 31, the title "Special Representative of the Reichsfuhrer SS for the A4 program" was replaced by the title "Sondervollmachter-2/Sb-2 des Reichsfuhrer SS".

In January 1945, Kammler also became the "Fuhrer's representative for overcoming bombing terror". In practice, this affected both the production of fighter planes and the surface-to-surface missiles, which are still under investigation.

In mid-January 1945, the war situation began to change at an uncontrollable pace - the Soviet January offensive was launched. Up to this point, the leadership of the Third Reich had not felt any direct threat to the existence of the state, and the situation on the fronts was relatively stable. At the turn of the year 1944/45, the economy was still functioning relatively well, with some production areas (tanks, small arms and new submarines) even recording maximum values. Apart from East Prussia and the troop formations scattered further north-east, the eastern front around the Vistula line was stable for almost half a year. The territory of the Third Reich was still huge and included, among other things, part of the General Government, the Czech Republic, part of Hungary up to Lake Balaton, as well as all of Denmark and Norway. The counter-offensive in the Ardennes, which held up the western front for several months (December / January), as well as stories about revolutionary weapons, made it possible not to give up hope yet. This temporary illusion was shattered in January after the Vistula line was breached. The Russians and the Polish People's Army were now advancing at no less than a few tens of kilometers a day.

On January 31, Kammler was already responsible for the V1 as part of the authorization to manufacture the V weapons. Corresponding units were subordinated to the Waffen-SS. On February 6, 1945, he becomes "Special Representative 'Z' of the Reichsfuhrer SS" (Sb-Z). In this case, his competencies included "all types of long-range weapons [missiles and the V3] and guided anti-aircraft missiles". On February 7, he became the comparable "special plenipotentiary" of Reich Marshal Goering

this area. On February 13, Kammler took control of all high-frequency research in connection with the planned revolution in the Reich's air defenses.

In January and February 1945, Kammler also tried again to enter a field previously reserved for the Luftwaffe. Namely, the SS took complete control of research, production and operational plans for rocket-propelled fighter aircraft armed exclusively with the Ba-349 *(Natter)* rockets . They were intended to be fired from vertical ramps and used to protect individual facilities. As of April, only 36 had been made, including seven manned versions - although eventually all combat machines would be manned. On the 28th.

February saw the first attempted launch with a pilot on board, which ended in his death. The matter is interesting in that it represented an open attempt at the formation of an SS Luftwaffe. A conflict with Goering, who was sensitive in this area, was cleverly avoided. He had earlier effectively blocked the construction of the aircraft carrier *Graf Zeppelin* because he could not bear the idea that the navy should have its own air force. A dispute could be avoided because the *Natter* was classified by the SS as an anti-aircraft missile.

In March, Kammler [“should” because the document has not been preserved] is said to have signed the order to murder all the prisoners in the *Mittelwerk* camp because they were bearers of secrets. Because of plans to start mass production of surface-to-air missiles (which probably only existed on paper), Kammler was appointed "Special Representative for Combating Four-Engine Aircraft" on March 27.
On the same day he was appointed "plenipotentiary of the Führer for jet aircraft" - and this at a time when the Soviet Army and the Polish People's Army were already preparing for the Battle of Berlin (beginning in April) and the Allies three weeks earlier at the Western Front forced the Rhine and moved east.

According to Hitler it was "the last large contingent in the armaments sector" - which is basically correct, with the one restriction that its size 33 Goebbels in his imagination. described that in his case only existed Diary as "obtaining the greatest power from the leader". Perhaps what he meant by that was that Kammler, in connection with this power of attorney, no longer

was subordinate to Himmler; now he was directly responsible to Hitler. on the 8th On April 1, Kammler appointed SS-Obersturmfuhrer Matare as his official representative for matters connected with the production of jet fighters - a Oberleutnant! He cooperated with Degenkolb, Speer's representative. In this context, in March, Kammler was about to receive his final promotion to Obergruppenfuhrer, ie General. He even considered discontinuing V2 production in order to be able to use the existing underground factories to manufacture jet engines.

On April 3, 1945, he was appointed "General Commissar for the entire air armament" - no longer by Himmler but by Hitler. This time, too, he was exclusively responsible to him. April marked yet another turning point in his career, which was slowly coming to an end. He became the “Reich Plenipotentiary for the establishment of the research center in Pilsen on the question of atomic technologies for the In the future Propulsion of guided missiles and aircraft". [41]
In chapters we will come back to the fascinating role of Pilsen and this research work. It is one of the most interesting mysteries of World War II!

On April 16, Speer's former Ministerial Director Dr. Ing. Gerhard Degenkolb appointed general commissioner for program 262. A day later there was the first unmistakable sign that the end was very near - although Kammler was still showing signs of lively activity at this point in time. He sent a telegram from Munich to the SS headquarters, refusing to hand over a special Junkers transport plane (which then ended up in Prague). He held the last armaments conferences in Ebensee and Salzburg (Austria). At the turn of the month April/May he gave his wife cyanide capsules and said to his children: "We will never meet again". He embarked on his last unexplained mission - to the Czech Republic.

One version says that he was surprised by the outbreak of the uprising in Prague and began to flee south of the capital on May 9 in a convoy made up of survivors of the *Der Führer* division and other Waffen SS units. These were remnants of those of SS-Gruppenfuhrer von Pückler-Burghauss

commanded "combat group". According to this version, Kammler passed Jílové (German: Eulau) and reached the Danube, which he crossed near Davle (Dawle). In the evening of that day, Graf von Pückler contacted the American leadership. The further fate of the most powerful figure in the Third Reich after Hitler (in the final phase of the war) is uncertain. There are conflicting versions about his death, it is not even certain if he died at all at that time.

These versions have been presented below, but before we consider their meaning, it would be important to consider the following rather interesting and important question: Why did a senior officer of the SS, charged with genocide, throw himself in the face of the imminent and looming catastrophe Captivity practically in the arms of the Red Army - didn't they all escape to the West or to the Alps? After all, the stories circulating at the time about the Soviet conquest of the German Empire aroused more associations with legends about medieval raids by Mongol hordes. In any case, such behavior was very strange. Regardless of the individual versions of the course of his last days, the following thesis can and should be put forward: either he was cooperating with the Russians, or he had such a special job to do in the Czech Republic that he was willing to do it at the price of his own to fulfill life! Something that was more important than the existence of the Third Reich. In its realization he was apparently disturbed by the unexpected outbreak of the uprising.

Valuable conclusions in connection with the second part of this thesis can only be drawn if we first consider what the SS actually did in the Czech Republic (see next chapter).

So let's first look at the other versions about these days of May that different researchers present. In 1948, Kammler's wife Jutta applied to have his death declared by a court, citing May 9, 1945 as the time of death. She referred to the statement of his driver, SS-Oberscharführer Kurt Preuck, who had stated that he did not know the cause of death and the exact circumstances of his death, but that he found Kammler's body near Jílové, about 50 km to the south, on May 8th seen from Prague and attended the funeral. However, the body has never been found. Even more: Preuck wrote in the 1950s that the death took place “around May 10th”.

Preuck's version might be considered credible were it not for the fact that it was not corroborated by any of the other SS officers who had been in contact with Kammler in the past few days.

The British historian and journalist Tom Agoston, who worked as a reporter in Germany shortly after the war, popularized in the West another version, also advocated by Speer, and later described by Joachim Fest, a respected German historian. During the Prague uprising, the general is said to have stayed in the city, more precisely in one of the bunkers, behind a gas-tight armored door, together with his adjutant and other unknown Germans. On May 9, a partisan patrol in a partially bombed building noticed this armored door and tried to open it, but without success. It was only when various weapons were fired at her that she was almost ripped out of the door frame. About 20-30 soldiers and Waffen-SS officers are said to have been inside. A bitter fight ensued. Kammler is also said to have grabbed a submachine gun and tried to respond with fire in a narrow passage. Behind him stood his adjutant, who mistakenly hit his superior in the head with a short series. It is said to have been SS Obersturmbannfuhrer Strack. The whole thing is said to have happened the day before the Russians marched into the city. It must be admitted that this version has an undeniable "advantage" - it excludes the identification of the bodies. As far as I know, no information has come to light that could be taken as proof of its authenticity!

Wilhelm Voss, the director of the Skoda works described in the next chapter, gave a version that he is said to have heard from SS men on May 12. Kammler is said to have been in the convoy of some SS vehicles somewhere between Prague and Pilsen (ie south of Prague, which agrees with the first version). Suddenly he ordered to stop and ran straight into the forest without any explanation. It was tacitly assumed that he was there to fulfill a human need, and the vehicles were parked along the roadside. After a while, however, his aide went in search of him and found the corpse, still warm, with traces of a crushed glass vial between its teeth.

Supposedly he buried them on the spot and the vehicles made themselves

on the way again. Of all the versions, this is the most likely: in 1958 there was a trial against SS men who had witnessed this incident, although the trial itself concerned the murder of more than a hundred Polish and Soviet forced laborers in Holland. They were murdered on Kammler's orders by a unit under his command that operated V1 rocket launchers. On this occasion, the accused were also interrogated in detail about the events in the Czech Republic; they confirmed the above version. After some time, however, Voss himself began to doubt its authenticity. He couldn't believe that a man of such caliber could have succumbed to fate so easily.

After all, Kammler possessed golden knowledge of the details of the most advanced concepts of the Second World War, and if the Americans or the Russians had not received him with open arms for his war crimes, surely many third world countries would have gladly granted him a life of wealth, without paying attention to all aspects of his CV. At least that's what Voss later claimed.

One version says that the general was not accidentally killed by his adjutant in Prague. However, there are no further details available that would allow this representation to be assessed.

Agoston went to great lengths to locate former Waffen-SS officers who had been in contact with Kammler in early May. He found two former officials of the Prague branch of the Special Staff Construction Bureau. Here is the statement of the first officer: “Kammler came to Prague in

> early May, for which we were not prepared. He did not announce his visit. No one knew why he came here, as the Red Army was already advancing.
>
> However, we had the impression that he was making a stop on the way elsewhere. He was not interested in the office and did not use the study that was given to him. At that time, most of the Czech population turned against us. Even before the uprising, German women and collaborators were brutalized: they were hung from lanterns and trees, or doused with gasoline and lit as living torches.
>
> When the news got around that the Czechs' calls for help to the West had had no effect, the approaching one was already raging

Revolt. Most of the German population in Prague began to panic. Everyone who had access to alcohol drank.
Kammler remained calm, ignoring the orgies and the mood of the defeatist cries 'red today - dead tomorrow' [a cry from Bavaria from the time of the Soviet revolution]. He even found time to teach his former steward how to set his boots, always polished, so that they stood straight." Here is the second statement: "At dawn on May 5, just as the insurrection in Prague was about to break out in full force , Kammler organized a parade of all men of German nationality who could carry a gun. All were given handguns. Kammler said that according to information given to him, the insurgents' nearby arms depot was weakly guarded and we should try to blow it up. We were guided by the informant and Kammler found the hiding place. The security guard was killed. We blew everything up and fled.

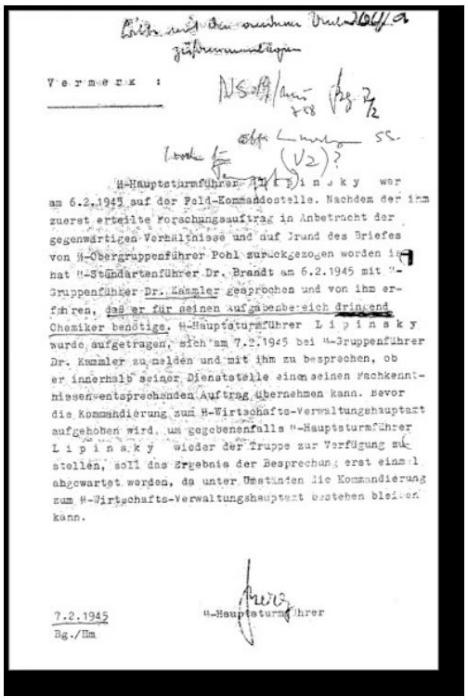
For the next three days (until the 8th), the general, I, and four other people managed to hide on the outskirts of town.
Finally we managed to escape from Prague. On the 8th we boarded a truck at night and headed west. Kammler decided that we should try to spend the night at the SS barracks in Ruzynÿ on the outskirts of Prague. However, when we entered the barracks area, we noticed that it was occupied by Vlasov units. You fought well with the SS, but you know what it's like when you don't like the way someone looks. We didn't like her look at all. With the 'Ivans' around the corner, there was a risk that the Vlasov units would turn us over - and especially the general - as security. […] So we left the barracks in Ruzynÿ and headed towards Cheb (Eger) on the German border so that we had a chance to get to the American zone. The Red Army already had most of Czechoslovakia under control and the war was over. Then we met some Americans near Karlovy Vary (Carlsbad). Somehow we managed to get them

to dodge, and we fled into the forest. It was outside the combat zone, and there were no signs of the Red Army's presence either, so we set up camp.

The next morning the general asked us to gather around him. It was supposed to be a farewell speech. We stood to attention while Kammler told us that he was releasing us from all duties and we could go home since the goals set by the Führer were unattainable. Then Kammler went into the forest. A single shot was soon heard. We ran after him, but it was too late. He shot himself with his service pistol. We buried him right there."

It is also possible that none of the above versions are true.

A previously unknown oddity regarding Kammler's plans - a "note" dated February 7, 1945, probably written by someone from the Sonderstab or the WVHA (the former arose on the basis of the latter, by the way):



Vermerk :

H-Hauptsturmführer L i p i n s k y wor am 6.2.1945 auf der Feld-Kommandostelle. Nachdem der ihm zuerst erteilte Forschungsauftrag in Anbetracht der gegenwärtigen Verhältnisse und auf Grund des Briefes von H-Obergruppenführer Pohl zurückgezogen worden ist hat H-Standartenführer Dr. Brandt am 6.2.1945 mit H-Gruppenführer Dr. Kammler gesprochen und von ihm erfahren, daß er für seinen Aufgabenbereich dringend Chemiker benötige. H-Hauptsturmführer L i p i n s k y wurde aufgetragen, sich am 7.2.1945 bei H-Gruppenführer Dr. Kammler zu melden und mit ihm zu besprechen, ob er innerhalb seiner Dienststelle einen seinen Fachkenntnissen entsprechenden Auftrag übernehmen kann. Bevor die Kommandierung zum H-Wirtschafts-Verwaltungshauptamt aufgehoben wird, um gegebenenfalls H-Hauptsturmführer L i p i n s k y wieder der Truppe zur Verfügung zu stellen, soll das Ergebnis der Besprechung erst einmal abgewartet werden, da unter Umständen die Kommandierung zum H-Wirtschafts-Verwaltungshauptamt bestehen bleiben kann.

7.2.1945
Bg./Hm

H-Hauptsturmführer

"SS Hauptsturmfuhrer Lipinsky was at the field command post on February 6, 1945. After the research assignment that was first given to him in

> In view of the current circumstances and because of the letter from SS Obergruppenfuhrer Pohl, SS Standartenfuhrer Dr. Brandt on February 6, 1945 with SS Group Leader Dr. Kammler and learned from him that he urgently needed chemists for his area of responsibility." (BA / N-1340 / 253)

Lipinsky was assigned to Kammler, where he was to deal with the implementation of the relevant tasks. It is important to note that, even in the face of the collapse of the front, chemistry research - which was already very important - was suddenly given priority by Kammler's staff as well. Was this the last desperate plan to save the Third Reich?

The “SS Model State”

The somewhat vague-sounding title of this chapter is a phrase that Hitler is said to have used in conversation with Reinhard Heydrich when discussing his (and Himmler's) plans for the Czech Republic. This fact alone is an important, but by no means the only argument for taking a closer look at the Czech Republic. I would therefore like to present the reasons that prompted me to pursue this topic.

Although the full seizure of power over the Czech Republic (the Protectorate of Bohemia and Moravia) by the SS meant that Heydrich de facto took over the helm, the previous Reich Protector was still an SS group leader (Constantin

von Neurath was previously Reich Foreign Minister). It should not be forgotten that he formally functioned as Reichsprotektor the whole time - Heydrich was "theoretically" only his representative. (Federal Archive Koblenz)

1. For years I've been trying to uncover the truth about some projects implemented by the Third Reich in Lower Silesia, which include such monstrous yet still mysterious undertakings as the Riese complex, which was built by the SS in Ksiÿÿ (Fürstenstein) and in other places of the nearby mountains, the connection between the "underground area" and the space research of Prof. Strughold in Szczawno Zdrój / Bad Salzbrunn (see Volume II), etc. I know two people who have access to original documents about this area, ie to information that originated from the war or was obtained in the years immediately afterwards through reconnaissance measures. Here I mean in particular my informant Professor Mieczysÿaw Moÿdawa, who was mentioned in Volume II at the beginning of the last part and the last years of the war in the Technical Office of the Gross concentration camp

   Rosen spent where he "served" many Lower Silesian armaments projects in terms of manpower. In numerous conversations with these people, names of places that were on the other side of the mountain in the Czech Republic came up again and again. I soon realized that there are certain connections that need to be elucidated if we are to get answers about Lower Silesia itself.
2. It is no secret that the so-called "Protectorate of Bohemia and Moravia" was almost exclusively under the control of the SS. There was no "civilian administration" there, e.g. B. in the General Government. The SS General had supreme power. Of course, this motive will be developed further below.

   At first it was unclear how Himmler intended to take advantage of this situation, but it certainly seemed worthwhile to get to the bottom of the matter more closely, which was of course reinforced by the fact that Kammler's trail also led there - especially because the goal and the nature of this mission so puzzling
   were.
3. In 2000 I met British researcher Nick Cook.
   His interest was sparked by certain research that

carried out by the Germans in Lower Silesia.
That's why we undertook a joint "expedition". I consider him a respected journalist - he is an analyst for the publishing group Jane's. It publishes many magazines and military yearbooks that are considered a form of canon around the world.

Heydrich - one of the few exceptionally intelligent people in Himmler's environment. (author's collection)

A few years later, Cook published a book describing his investigative attempts to unravel the mysteries of a number of advanced flight concepts, beginning with projects initiated by the SS during the war and ending with the latest American research. What surprised me the most in the book were the numerous references to everything that was happening in the Protectorate, especially at the end of the war, although they were based on already known sources. There were not only numerous flight factories there, but also research facilities, including some that were connected to the SS - fighter planes with ramjet engines were even being developed at Skoda.

All of this confirmed my intuitive belief that the key to many important questions surrounding the most interesting concepts of World War II lay right there - or in the archives where such material might be found. An additional incentive was the fact that no one had seriously dealt with this complex of topics, which made it possible for me to find it

of "original sources" especially for research projects. I assumed that with such a scope of operations, there must be something left, even if only scraps of information, that would shed new light on the whole. Motivated in this way, I started a relatively large-scale search operation, which was able to prove (or disprove) the following: 1. More important and interesting things had happened in the Czech Republic,

than previously reported in the literature.

2. The SS played the key role in this.
3. The mysteries surrounding the “Lower Silesian” projects were closely related to something that was happening south of today's state border, sometimes only tens of kilometers away.

I leave it to the reader to judge the results.

My first step was to look at the source Nick Cook was using - a source that was meant to bring to light a whole new reality. It was the book by the already mentioned Tom Agoston, which was based on his own investigations immediately after the end of the war (he wrote reports about the background to the Nuremberg Trials, among other things), but above all on conversations with Dr. Wilhelm Voss, the former director of Skoda. 40 So let's start with who this informant was and what the former Skoda works really were.

Let's start with the latter question:

SS Obergruppenfuhrer Reinhard Heydrich in the Hradschin district of Prague. Despite his "iron hand" (liquidation of the resistance movement), he was able to win over a large part of the population - especially the employees of the Czech armaments industry, whose productivity was very high during his reign. Perhaps he was Himmler's best advertisement and guarantor of his ability to manage the industry. Many even considered him the successor to Hitler himself. (author's collection)

Before the war, Czechoslovakia had a much more modern and better developed armaments industry than Poland. It was dominated by a group - by Skoda, which was closely linked to American capital. By virtue of the Munich Agreement, Skoda was taken over by the Third Reich when the Czech Republic was annexed. First the concern came under the sphere of influence of Krupp, but eventually it became part of the Hermann-Göring-Werke. The company was merged with the ÿeská Zbrojovka company (which was renamed "Armaments Brno"), resulting in the new Waffen Union.

The village of Lidice (Liditz), which was massacred after the Heydrich attack. (author's collection)

dr Wilhelm Voss was their company manager from 1938 until January 27, 1945, when he was dismissed by him for his refusal to receive two permanent special emissaries from Göring. He was even forbidden to enter the factories, but he was respected even by the Czech workforce, so it was of little practical importance.
At the same time he acted (officially) as a department head in the Speer Ministry, but stayed mainly in the protectorate. He was known for his concern for both the condition of the plant and employee satisfaction. He put e.g. B. by the fact that salaries were paid in Czech crowns, which was a back door to the

increase salaries significantly. Voss had access to many top-notch secrets through his job and personal connections. His report shows, among other things, that she worked at Skoda together with Kammler 40

> “[…] set up what 'insiders' generally considered to be the most modern research center in the Third Reich dealing with advanced technology. It conducted research in secret and completely independently for the SS and was under the special patronage of Hitler and Himmler. The institution worked on scientific knowledge beyond the normal research scope and profile of Skoda's R&D department, known all over the world, in close cooperation with Krupp [reminiscent of Gÿuszyca (Wüstegiersdorf) in the context of the *Riese* complex] and mainly dealt with the Investigation of captured equipment, including flight equipment [this again reminds of Ksiÿÿ (Prince's Stone)], copying and improvement of the latest solutions. In realizing these projects, the SS group is said to have gone beyond the first generation of secret weapons.
>
> Their goal was to build aircraft with nuclear or other propulsion systems somehow related to nuclear physics, and energy beams, then called 'death rays', as well as a whole range of homing guided missiles [to develop]. Research was also conducted to identify other areas of potential technical breakthroughs. In today's modern engineering jargon, these measures would probably be described as an SS think tank, locking up the brightest minds and cutting them off from the rest of the world.
>
> Some research on the second generation of secret weapons, including the use of nuclear physics to propel guided missiles and aircraft, was already very advanced.”

It should be emphasized that the above characteristic is directly based on the description of Dr. Voss is based!

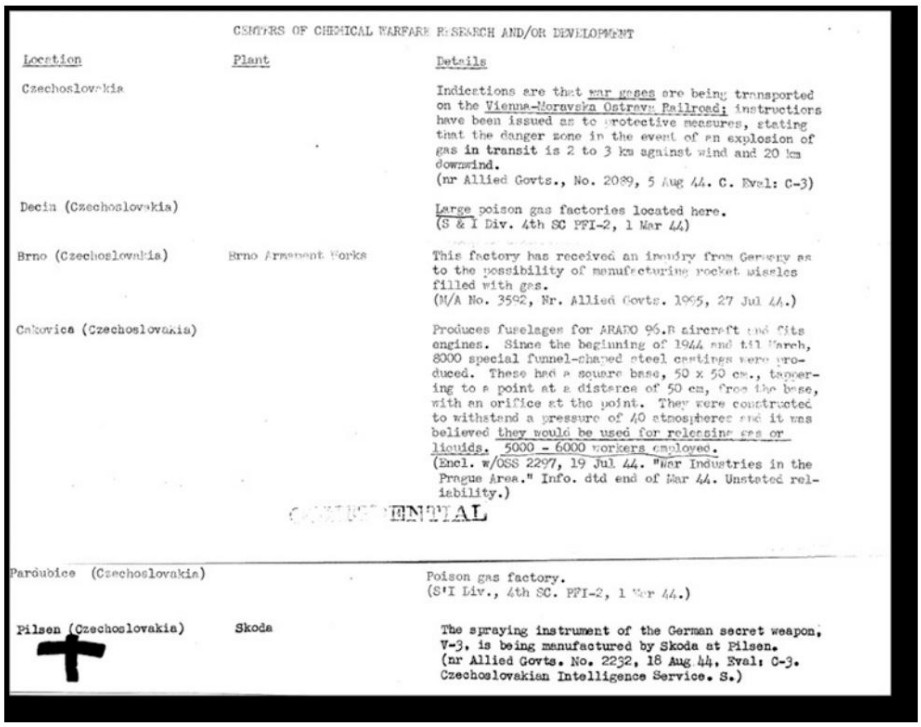
A drive for guided projectiles? For those so badly needed

strategic weapons? It's hard not to associate this with chemical weapons, although this motif appears both in the Czech Republic and in Pilsen itself.

A map of the administrative divisions of the Third Reich. You can see the formal subdivision of the Czech Republic into the Protectorate and the Sudetenland.

The matter requires certain considerations. The first, somewhat superficial interpretation of these words is the association with something reminiscent of today's propulsion solutions for nuclear submarines - a system fed by a normal reactor, like in a power plant. It is probably obvious that this interpretation should be rejected. The Germans had tremendous difficulty building a working nuclear reactor; the variant that the reactors were produced "in series" in some miniature version that would have found space in one floor is therefore simply ruled out. Even today, something like this would not be possible, despite major advances in the field of nuclear energy technology.
Incidentally, such a hypothetical system will not be able to compete with a normal rocket engine even in 10 or 30 years. We should also not forget that Voss spoke of "very advanced" work. Incidentally, Kammler had a month in mind

At the end of the war, the above-mentioned mission related to Pilsen (where the center was located) would not be realized if the prospect of using the results of the work to push back the enemy armies was not really close, i.e. if it was not a very concrete arsenal would have acted.



CENTERS OF CHEMICAL WARFARE RESEARCH AND/OR DEVELOPMENT

Location	Plant	Details
Czechoslovakia		Indications are that war gases are being transported on the Vienna-Moravska Ostrava Railroad; instructions have been issued as to protective measures, stating that the danger zone in the event of an explosion of gas in transit is 2 to 3 km against wind and 20 km downwind. (nr Allied Govts., No. 2089, 5 Aug 44. C. Eval: C-3)
Decin (Czechoslovakia)		Large poison gas factories located here. (S & I Div. 4th SC PFI-2, 1 Mar 44)
Brno (Czechoslovakia)	Brno Armament Works	This factory has received an inquiry from Germany as to the possibility of manufacturing rocket missles filled with gas. (M/A No. 3592, Nr. Allied Govts. 1995, 27 Jul 44.)
Celovice (Czechoslovakia)		Produces fuselages for ARADO 96.B aircraft and fits engines. Since the beginning of 1944 and till March, 8000 special funnel-shaped steel castings were produced. These had a square base, 50 x 50 cm., tapering to a point at a distance of 50 cm, from the base, with an orifice at the point. They were constructed to withstand a pressure of 40 atmospheres and it was believed they would be used for releasing gas or liquids. 5000 - 6000 workers employed. (Encl. w/OSS 2297, 19 Jul 44. "War Industries in the Prague Area." Info. dtd end of War 44. Unstated reliability.)
Pardubice (Czechoslovakia)		Poison gas factory. (S'I Div., 4th SC. PFI-2, 1 Mar 44.)
Pilsen (Czechoslovakia)	Skoda	The spraying instrument of the German secret weapon, V-3, is being manufactured by Skoda at Pilsen. (nr Allied Govts. No. 2232, 18 Aug 44, Eval: C-3. Czechoslovakian Intelligence Service. S.)

A collection of intelligence snippets from an American report *(Project 363)* showing something almost nobody is aware of - that the Czech Republic played a key role in preparing for an all-out chemical offensive (only some of the snippets were printed). This motif also appears in relation to a new retaliatory weapon being researched in Pilsen. (NARA)

There is of course a more realistic and simpler solution than a reactor-propeller system. Something that propels and is based on phenomena from the field of nuclear physics, but not at all with a normal reactor, ie with fuel rods, a lead jacket and the like. have to do. So could it not be the same as what was described in the last 60 pages at the end of the second volume? Maybe, but we don't know that yet.

There is one more question that arises on this occasion.
As I'm sure readers of my previous books know, those of

Professor Hubertus Strughold in Szczawno Zdrój (Bad Salzbrunn) carried out research on the most interesting works carried out by the Germans in Lower Silesia at the end of the war. They were described by him in an interview he gave to Kÿkolewski and took place in an underground Luftwaffe facility near Ksiÿÿ. During the interview, he described a device in which "space flight was simulated", but this was apparently done to the fullest since there was a human in the capsule. At that time it is said to have turned out that problems with the control system arose due to vibrations. This is important information that can be interpreted in two ways: 1. Either there was a supersonic/transonic wind tunnel for testing e.g. B. 1:1 scale rockets and space capsule underground; however, such an installation would be so huge (about the size of half a football field) that an underground construction can be ruled out. Above all, building a tunnel on a 1:1 scale would be irrational.

2. We could of course assume that the simulator was a slingshot, but it is not controlled and there is no corresponding vibration.

3. The third interpretation is that it wasn't so much an object moving relative to air as simply an engaged engine on the test bench. But a space rocket with a working engine would not have been tested underground! Unless, as Voss already pointed out, the Germans opted for a completely different drive for strategic weapons. Maybe that's what it was all about? Of course we don't know that - these are just non-binding considerations.

Voss' explanations and the information that Agoston found himself contain many other very interesting details:

"The SS measures on the Skoda premises were initiated without the knowledge of Goering, Speer and other research centers of the Third Reich. The creators of the V1 and the V2 were also kept away from it all. Secret SS research work was

Part of Himmler's dream - just like the Rhine gold from the 'Nibelungen' after being re-forged into a ring, they should enable the owner to rule the world, and the SS research team should similarly enable the Greater German Reich to conquer a large part of the world conquer.

The intelligence reports show that plans, drawings, calculations and other similar documents were protected by a triple ring of counterintelligence specialists; they were assigned by Himmler to prevent leaks and sabotage in the research departments and the facilities themselves. The SS group was internally subordinate to the Kammlerstab. […]

The SS team in Pilsen was financed by Voss, who must have been at least partially informed in this connection, since he later reported to me in Frankfurt in 1949 about the construction [of the facility]. In many lengthy interviews in Frankfurt and at his home in Bavaria, Voss talked about this past activity with particular frankness.

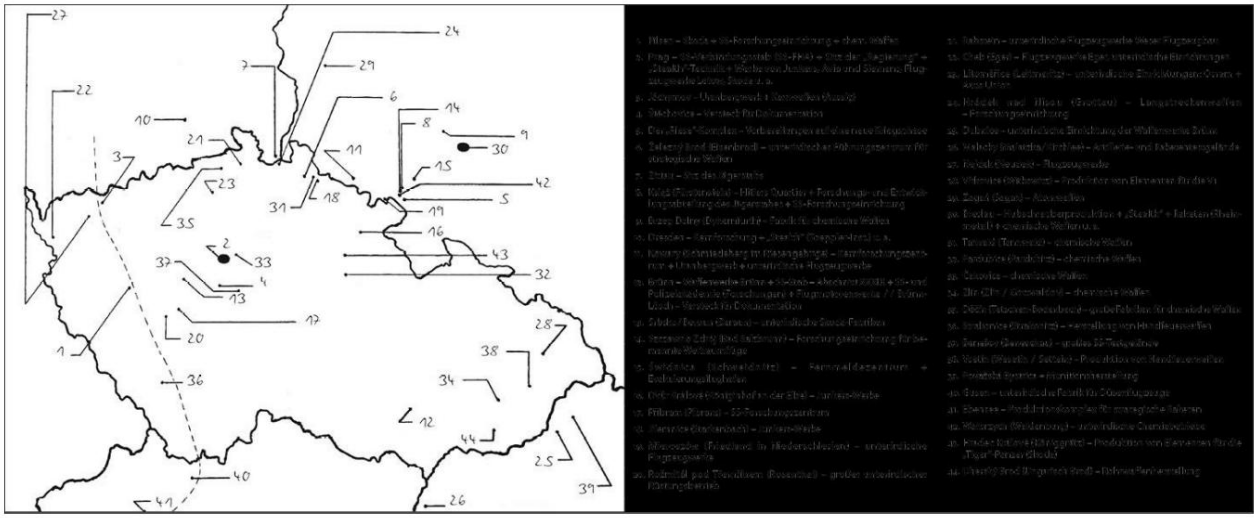
the open Skoda's research and development department worked relatively closely with the SS group on certain projects. This ensured an effective camouflage for the specialists subordinate to Kammler, who were brought in in great secrecy from research institutes throughout the German Reich to support the experts on site. Voss claimed that all were selected based on their knowledge and not on the notes in the party files. Everyone had to have the ability to face visionary projects.

There were also some Czechs there. Some worked in the United States before the war.

Participation in Kammler's project gave the experts new opportunities. […] Many scientists who wanted at all costs to have their research published in printed form – even if it was classified – sent it to the Central Office for Scientific Publications, which in turn sent it to the appropriate recipients. Some of these elaborations formed the basis for the selection of candidates for the group that

> Skoda works worked.
>
> For Himmler it was a matter of the highest priority to 'channel' all contracts for research work by the Waffen-SS through Skoda. He placed an extraordinary emphasis on a 'smooth' cooperation between Skoda and the armaments office of the Waffen-SS [So again the "Technical Office VIII" of the SS leadership main office appears!]. This is reflected in the correspondence between Voss and Himmler. To ensure cooperation, Himmler set up the Waffen-SS liaison staff at the Skoda works and made Voss responsible for proper cooperation. Voss therefore sent the reports directly to Himmler. He noted that the armaments hierarchy was initially very reluctant to put Skoda on an equal footing with Krupp and other German companies - perhaps because they viewed the former Austrian and later Czech operations as 'foreign'. […]
>
> Hitler […] ordered that Skoda immediately be given the same status as the other German companies, also with regard to secret equipment. He said this on March 15, 1942 during a conversation with Heydrich."

We shall come back to Heydrich's activities later, since he was most credited with transforming the Protectorate of Bohemia and Moravia into such an efficiently functioning armaments machinery. Let's stay with Agoston's description for now:[40]



Map of the Czech Republic and the adjacent part of Lower Silesia, on which the most important facilities described in the book are marked. Boundaries are as they are today. The line that Patton's army approximated was shown as a dashed line.

“Despite Speer's extraordinary efforts to keep Skoda in his sphere of influence, Himmler scored a success in effectively turning these works into an SS operation with Kammler as the main liaison. In order to minimize internal competition between [central] offices, Voss remained Himmler's discreet informant. In July 1942, when the research work on a new, very accurate bomb was completed in the works, Voss first sent the report on the progress of the work to Himmler before forwarding it through the official distribution channel. Reich Marshal Erhard Milch, who was then responsible for all Luftwaffe production, was to receive the report first.

Voss knew of the internal battles that raged about him at every possible opportunity, so he enclosed a note with the letter asking Himmler's permission to send the report to Milch. Then, in a letter stamped 'top secret', he thanked Himmler for his initiative to ask Hitler's approval for the 'channelling' of all work related to the research and development work and Skoda's production for the Waffen-SS stood. He added that he

make every effort to fulfill all wishes, especially those concerning the Waffen-SS, 'in every respect'."

1939 - the Germans occupy Pilsen, one of the main centers of Czechoslovak armaments industry. (Archive)

Just as Otto Schwab was formally commander of an artillery school, the special liaison staff of the Waffen-SS, which was set up after these events, was also officially in Prague. A sign of the new times, however, was that Dr. Voss (who was formally still an official in the Speer Ministry!) signed all documents with "SS Standartenfuhrer" as early as the summer of 1942.

The unusual career of Himmler in the Reich Protectorate of Bohemia and Moravia naturally raises the question of why - why the Czech Republic? With this question we return to the role played by SS Obergruppenfuhrer Reinhard Heydrich in the first half of the war. On 3 September he was appointed by Hitler as the "governor" of the new province - formally Heydrich was Konstantin von Neurath's deputy when the latter had been sent on convalescence leave, but in practice he ruled the protectorate. Such a supreme administrative power role, exercised by an SS leader and Himmler's direct governor, was unique in all of occupied Europe. Heydrich was "a prince of the SS" who ruled almost exclusively. He took office on September 27 without giving up his position as head of the Reich Security Main Office (RSHA).

The direct impulse for Hitler to make such a decision was the systematically increasing role of the Czech resistance movement, which von Neurath had nothing to oppose. The same reasons made Karl Hermann Frank, the Higher SS and Police Leader in the Protectorate, a marginal figure who later became just a passive executor for the

instructions of the "Protector".

Czech resistance did not take such a “dangerous” form for the Third Reich as e.g. B. in Poland, but testified to the failure of the previous soft policy of civil provincial administration. It should rather express a demonstrative dislike. On February 24, 1941 z. B. in Prague traditional celebrations in connection with St.
Matthew, the patron saint of the city. It was planned to combine it with a winter relief operation for the German soldiers fighting on the Eastern Front. The whole thing was given a full artistic and propaganda framework. This was intended to express solidarity with the politics of the Third Reich. Basically, it was based on the illusion of "closeness" between Czechs and Germans. The magic broke when the Czechs not only boycotted the festival, but also held an open anti-Nazi demonstration on a large square in the Dejvice district.

Such actions were repeated. Although they were suppressed and there were casualties, the previous administration feared a possible bloodbath (which would certainly have been carried out without hesitation in the Generalgouvernement) as it would have disrupted the supply of the Wehrmacht with weapons manufactured in the Czech Republic - and the Czech Republic had a lot important armaments industry. A day after Heydrich's arrival a boycott of the entire press was organized.

Although the underground movement was not preparing any armed actions, it was very dangerous. In their leadership was the intellectual elite of the Czech people - a small group, but implementing a thoughtful long-term policy that left no room for spectacular but useless bloody outbursts. The other side of the coin, however, was the ability to relatively easily disable the entire infrastructure due to its centralized nature.

Heydrich did not hesitate to unleash bloody terror directed against this leadership. On the very day he arrived in Prague, he signed a decree introducing a state of emergency and ordered a whole series of executions intended to "prevent riots". Around 6,000 people were arrested in the first week after Heydrich took office, and around 5,000 were executed by the end of 1941. The apparent autonomy was abolished and many